

Set	Items	Description
S1	45418	CANULA? OR CANNULA? OR CATHETER?
S2	0	DC=(E01.370.370.380.410.200 OR E02.148.110 OR E5.135 OR E5-.140 OR E5.145 OR E2.620.135)
S3	13415	STYLET? OR GUIDEWIRE? OR GUIDE()WIRE? OR STIFFENER?
S4	5697	(CURVEABLE OR CURVABLE OR MALLEABLE OR FLEXIBLE OR DEFORMABLE OR CURVATE OR BENDABLE) (2N) (WIRE? OR PROBE? OR NEEDLE? OR INTRODUCER? OR ADVANCER?)
S5	1307378	METHOD? OR PROCEDURE?
S6	1428642	SYSTEM? OR PROCESS?
S7	516688	INSERT? OR MANIPULAT?
S8	927832	REMOV? OR CONDUCT?
S9	248018	DISCHARG? OR PERFUS? OR INFUS?
S10	187735	VESSEL? OR VASCULA? OR VEIN? OR ARTERY? OR ARTERIE? OR BLO-ODVESSEL?
S11	4767	RETROGRADE? OR RETRO()GRADE? OR ANTIGRADE OR ANTEGRADE OR - (ANTI OR ANTE) ()GRADE OR CARDIOPL?GIA? OR RETROPL?GIA? OR (CARDIO OR RETRO) ()PL?GIA?
S12	0	DC=(E04.100.376.374 OR D18)
S13	41374	BALLOON? OR INFLAT?
S14	957952	LUMEN? OR INLET? OR OUTLET? OR PASSAGE? OR PORT?
S15	31272	IC=A61M?
S16	4476	S1:S2 AND S3:S4 AND S5:S6 AND S7:S9 AND S10 AND S13 AND S14
S17	1705	S16 AND S5:S6(5N)S7:S9 AND S7:S9(5N)S3:S4
S18	1229	S17 AND S7:S9(5N)S14
S19	88	S18 AND S11(5N)S1:S2
S20	59	S19 AND S15
S21	54	S20 AND PY<2003
S22	54	IDPAT (sorted in duplicate/non-duplicate order)

? show files

File 348:EUROPEAN PATENTS 1978-2003/Nov W05

(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20031211,UT=20031204

(c) 2003 WIPO/Univentio

22/3/2 (Item 2 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00594895

Styilet for installing a retrograde coronary cannula  
Stilett zum Einsetzen einer retrograden koronaren Kanule  
Styilet pour la mise en place d'une canule coronaire retrograde

PATENT ASSIGNEE:

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PATENT (CC, No, Kind, Date): EP 598403 A1 940525 (Basic)  
EP 598403 B1 960410

APPLICATION (CC, No, Date): EP 93118590 931118;

PRIORITY (CC, No, Date): US 979010 921119

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS: A61M-025/01 ; A61B-017/34

ABSTRACT WORD COUNT: 86

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF2	456
CLAIMS B	(English)	EPAB96	502
CLAIMS B	(German)	EPAB96	523
CLAIMS B	(French)	EPAB96	561
SPEC A	(English)	EPABF2	2486
SPEC B	(English)	EPAB96	2647
Total word count - document A			2942
Total word count - document B			4233
Total word count - documents A + B			7175

22/5/11 (Item 11 from file: 348)  
DIALOG(R) File 348:EUROPEAN PATENTS  
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00333240

IMPROVED RETROGRADE PERFUSION .  
RETROGRADE PERFUSION .

PERFUSION RETROGRADE AMELIOREE.

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PATENT (CC, No, Kind, Date): EP 331710 A1 890913 (Basic)  
EP 331710 A1 901003  
EP 331710 B1 940427  
WO 8901309 890223

APPLICATION (CC, No, Date): EP 88908482 880808; WO 88US2692 880808

PRIORITY (CC, No, Date): US 83673 870807

DESIGNATED STATES: AT; BE; CH; DE; FR; GB; IT; LI; LU; NL; SE

INTERNATIONAL PATENT CLASS: A61M-025/00

CITED PATENTS (EP A): US 4655746 A

CITED PATENTS (WO A): US 2854982 A; US 3888239 A; US 4192302 A; US 4445892  
A; US 4708718 A; US 4709703 A; US 4714460 A

CITED REFERENCES (EP A):

See also references of WO8901309;

CITED REFERENCES (WO A):

KATO et al, "Arterial Chemoembolization with Microencapsulated Anticancer  
Drug" Jama; 20 March, 1981, Vol 245, No. 11 pages 1123-1127, see page  
1124, column 1, lines 10-44;

ABSTRACT EP 331710 A1

Tumours in the body of a patient are studied in situ by a monitor (12),  
such as computer assisted tomography, X-ray or the like, while optimal  
flow paths through the tumour area are established. A catheter (52)  
with a suction lumen (50) and an infusion lumen (25), with seals  
(22, 56) associated with each, is placed in the patient's vein near the  
tumor. Flow is then sealed in the vein with the infusion seal (56). A  
carrier medium dye is injected into the tumor at selected flow rates and  
differential pressures. Flow of the dye through the tumor is observed on  
the monitor (12) to determine optimal retrograde perfusion paths  
through the tumor for the selected flow rates and differential pressures.  
Once the optimal perfusion paths are noted, microspheres with active  
ingredients, such as chemotherapy, can be selectively perfused through  
each of the paths in the tumor at desired flow rates, pressures and  
active ingredient dosages.

ABSTRACT WORD COUNT: 160

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Lapse: 020605 B1 Date of lapse of European Patent in a  
contracting state (Country, date): AT  
19940427, IT 19940427, NL 19940427, SE  
19940427,

Application: 890913 A1 Published application (A1with Search Report  
 ;A2without Search Report)  
 Examination: 890920 A1 Date of filing of request for examination:  
 890721  
 Change: 900912 A1 International patent classification (change)  
 Search Report: 901003 A1 Drawing up of a supplementary European search  
 report: 900813  
 Examination: 920909 A1 Date of despatch of first examination report:  
 920728  
 Change: 940406 A1 Representative (change)  
 \*Assignee: 940406 A1 Applicant (transfer of rights) (change): CANOPY  
 EDGE, INC. (1745100) 5620 Greenbriar Suite 105  
 Houston, Texas 77005 (US) (applicant designated  
 states: AT;BE;CH;DE;FR;GB;IT;LI;LU;NL;SE)  
 Grant: 940427 B1 Granted patent  
 Lapse: 950111 B1 Date of lapse of the European patent in a  
 Contracting State: AT 940427  
 Lapse: 950322 B1 Date of lapse of the European patent in a  
 Contracting State: AT 940427, NL 940427  
 Oppn None: 950419 B1 No opposition filed  
 Lapse: 991020 B1 Date of lapse of European Patent in a  
 contracting state (Country, date): AT  
 19940427, IT 19940427, NL 19940427,

LANGUAGE (Publication,Procedural,Application): English; English; English  
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	EPBBF1	426
CLAIMS B	(German)	EPBBF1	407
CLAIMS B	(French)	EPBBF1	495
SPEC B	(English)	EPBBF1	4089
Total word count - document A			0
Total word count - document B			5417
Total word count - documents A + B			5417

22/5/12 (Item 12 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00938384 \*\*Image available\*\*  
BALLOON CATHETER AND METHOD OF USE  
CATHETER A BALLONNET ET SON PROCEDE D'UTILISATION

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200272170 A2-A3 20020919 (WO 0272170)

Application: WO 2002US7070 20020307 (PCT/WO US0207070)

Priority Application: US 2001274286 20010308

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU

CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP

KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO

RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-029/00

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 8372

English Abstract

A retrograde venous cardioplegia balloon catheter (20) has a flexible cannula (22) on which is mounted an inflatable, tapered balloon (34) which divides the flexible cannula (22) into a proximal portion (22a) which is stiffer than a distal portion (22b). Balloon (34) may be inserted into a body opening, such as the ostium (46) of a human heart (52) to position soft, flexible distal portion (22b) within the coronary sinus (44). Balloon (34) is inflated to seal the ostium (46) and force may be applied by means of the stiff proximal portion (22a) to maintain the turgid balloon (34) in place to seal the ostium and leave substantially the entire coronary sinus (44) open to infusion by cardioplegia solution. A method of using the balloon catheter (20) includes positioning inflatable balloon (34) within the ostium (46) and imposing a force (e.g., by collapsing the right atrial wall) via distal portion (22b) on balloon (34) in its turgid condition, to maintain it in place within ostium (46).

French Abstract

Catheter a ballonnet (20) concu pour une cardioplegie veineuse retrograde et possedant une canule souple (22) sur laquelle est monte un ballonnet conique gonflable (34) divisant la canule flexible (22) en une partie proximale (22a) plus rigide qu'une partie distale (22b). On peut inserer ce ballonnet (34) dans une ouverture corporelle, telle que l'ostium (46) du coeur humain (52) afin de positionner la partie distale (22b) molle et souple a l'interieur du sinus coronarien (44). On gonfle le ballonnet (34) afin de fermer hermetiquement l'ostium (46) et on peut appliquer une force au moyen de la partie proximale rigide (22a) afin de

maintenir le ballonnet gonfle (34) en position, de maniere a fermer hermetiquement l'ostium et a laisser la totalite du sinus coronarien (44) ouverte afin de **perfuser** la solution cardioplegique. Procede d'utilisation de ce **catheter** a ballonnet (20) consistant a positionner le ballonnet gonflable (34) a l'interieur de l'ostium (46) et a exercer une force (par exemple, par repli de la paroi auriculaire droite) par l'intermediaire de la partie distale (22b) sur le ballonnet gonfle (34) afin de le maintenir en position a l'interieur de l'ostium (46).

Legal Status (Type, Date, Text)

Publication 20020919 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20021114 Late publication of international search report

Republication 20021114 A3 With international search report.

Republication 20021114 A3 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

22/5/13 (Item 13 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00889868 \*\*Image available\*\*

PERFUSION CANNULA  
CANULE POUR PERFUSION

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JORDANA Jorge L, Juana Azurduy 2304, 1429 Buenos Aires, AR, AR  
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Patent and Priority Information (Country, Number, Date):

Patent: WO 200222197 A2-A3 20020321 (WO 0222197)

Application: WO 2001IB1640 20010911 (PCT/WO IB0101640)

Priority Application: US 2000659937 20000912

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU  
CZ (utility model) DE (utility model) DK (utility model) DM DZ EC EE  
(utility model) ES FI (utility model) GB GD GE GH GM HR HU ID IL IN IS JP  
KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL  
PT RO RU SD SE SG SI SK (utility model) SL TJ TM TR TT TZ UA UG US UZ VN  
YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-039/02

International Patent Class: A61B-017/12

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 6040

English Abstract

A **perfusion cannula** having a proximal section configured for attachment to a source of **perfusion** fluid, and a distal section configured for **insertion** in a blood **vessel** for delivering **perfusion** fluid to the blood **vessel**. In one embodiment, the **cannula** generally comprises a shaft having a proximal end, a distal end, a distal shaft section between the proximal and distal ends of the distal shaft section such that an acute angle is formed between the proximal shaft section and the proximal end of the distal shaft section. A **lumen** in the elongated shaft extends within the proximal shaft section and the distal shaft section to and in fluid communication with a **port** in the distal end of the distal shaft section. The **lumen** is configured for delivery of fluid, and may be configured for slidably receiving a **guidewire** therein.

French Abstract

Cette canule pour **perfusion** comporte une partie proximale, concue pour se rattacher a une source de liquide de **perfusion**, et une partie distale concue pour etre introduite dans un vaisseau sanguin afin d'administrer le liquide de **perfusion**. Dans un mode de realisation, la canule comporte, generalement, une tige ayant une extremite proximale, une extremite distale et, entre ces deux extremités, une section distale, de sorte qu'un angle aigu est forme entre la section proximale et la section distale de la tige. Une lumiere menagee dans la tige, qui traverse les deux sections, proximale et distale, est en communication

fluidique avec un orifice situe dans l'extremite distale de la section distale de la tige. Cette lumiere, qui est concue pour delivrer un liquide, peut etre configuree pour renfermer un fil-guide coulissant.

Legal Status (Type, Date, Text)

Publication 20020321 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20020815 Late publication of international search report

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DIALOG(R)File 349:PCT FULLTEXT  
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00808603 \*\*Image available\*\*  
CATHETER WITH STYLET LUMEN  
CATHETER AVEC LUMIERE POUR STYLET

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Patent Applicant/Inventor:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200141858 A2-A3 20010614 (WO 0141858)

Application: WO 2000US33476 20001207 (PCT/WO US0033476)

Priority Application: US 99457502 19991208

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DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ

LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG

SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-025/00

International Patent Class: A61M-025/01

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 12134

English Abstract

The present invention features a **catheter** suitable for drug delivery. The **catheter** comprises a **catheter** body comprising a proximal and a distal end, and defining a drug delivery **lumen** and a **stylet lumen**. The **stylet lumen** comprises a distal end configured to permit a **stylet** to abut the **stylet lumen** distal end, and a proximal aperture which is distal to the proximal end of the **catheter**, providing entry of the **stylet** into the side of the **catheter**. The **stylet lumen** is adapted for slidably receiving a **stylet** which can be used to guide the **catheter** to the intended site in the body of a subject and thus to facilitate implantation of the **catheter**.

French Abstract

La presente invention concerne un **catheter** utilisable pour l'administration de medicaments. Le **catheter** comprend un corps de **catheter** comprenant des extremités proximale et distale et delimitant une lumiere d'administration de medicaments et une lumiere de **stylet**. La lumiere de **stylet** comprend une extremite distale configuree pour permettre a un **stylet** de se mettre bout a bout avec l'extremite distale

de la lumiere du **stylet** et une ouverture proximale qui est distale par rapport a l'extremite proximale du **catheter** , avec entree pour **stylet** sur le cote du **catheter** . La lumiere du **stylet** est concue pour recevoir couissant un **stylet** qui peut servir a guider le **catheter** jusqu'au site d'interet dans le corps du patient et faciliter ainsi l'implantation du **catheter** .

Legal Status (Type, Date, Text)

Publication 20010614 A2 Without international search report and to be republished upon receipt of that report.

Examination 20011018 Request for preliminary examination prior to end of 19th month from priority date

Search Rpt 20020131 Late publication of international search report

Republication 20020131 A3 With international search report.

22/5/19 (Item 19 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00780854 \*\*Image available\*\*

**METHOD AND APPARATUS FOR DIFFERENTIALLY PERFUSING A PATIENT DURING  
CARDIOPULMONARY BYPASS**

**TECHNIQUE ET DISPOSITIF D'EXECUTION D'UNE PERFUSION DIFFERENTIELLE SUR UN  
PATIENT PENDANT UNE CIRCULATION EXTRA-CORPORELLE**

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200113983 A2-A3 20010301 (WO 0113983)

Application: WO 2000US21088 20000802 (PCT/WO US0021088)

Priority Application: US 99368450 19990804

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DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC

LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK

SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-025/10

International Patent Class: A61B-017/12

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 26255

**English Abstract**

The present invention provides methods, systems and devices for performing cardiopulmonary bypass (CPB), cardioplegic arrest, suction of fluid from the aorta to remove embolic or other fluid from the general circulation and the selective segmentation of the arterial system to perform differential perfusion eliminating hypoperfusion. An aortic catheter having an arch lumen which extends at least in part along the length of the catheter shaft has a proximal opening coupled to a CPB machine and a distal arch opening. A corporeal lumen extends at least in part along the length of the catheter shaft and has a proximal opening coupled to a CPB machine and a distal corporeal opening. A suction lumen extends at least in part along the length of the catheter shaft and has a proximal suction opening coupled to a suction source and a distal suction opening residing in the aortic lumen of a patient.

**French Abstract**

La presente invention concerne des techniques, des systemes et des

dispositifs utilisables dans les cas suivants : circulation extra-corporelle, arret par cardioplegie, aspiration de l'aorte en d'un liquide embolique ou autre et segmentation selective du systeme arteriel en vue de l'execution d'une perfusion differentielle avec elimination d'hypoperfusion. Un catheter aortique avec lumen de crosse qui se prolonge au moins en partie le long de la tige de catheter presente une ouverture proximale reliee a une machine de circulation extra-corporelle et une ouverture en cintree distale. Une lumiere corporelle, qui occupe au moins une partie de la longueur de la tige de catheter, comporte une ouverture (inverted question mark) ? d'aspiration proximale reliee a une source d'aspiration et une ouverture d'aspiration distale logee dans la lumiere aortique du patient. Le catheter aortique decrit ci-dessus peut s'utiliser avec d'autres dispositifs et constituer ainsi un systeme de catheter comprenant une machine de circulation extra-corporelle, une source d'aspiration, divers contacteurs et un ensemble canule veineuse/catheter assurant la circulation extra-corporelle complete ou partielle ainsi que de debit de liquide antegrade ou retrograde. Ce systeme peut par ailleurs etre utilise dans le cadre de divers modes operatoires, dont techniques avec catheter coeur arrete, interventions chirurgicales concomitantes et interventions avec catheter, interventions chirurgicales sequentielles et interventions avec catheter et interventions et procedures d'appoint ou d'interruption rapide coeur battant avec catheter. Ce systeme permet d'assister le systeme circulatoire du patient et de proteger prioritairement la circulation cerebrale et corporelle.

Legal Status (Type, Date, Text)

Publication 20010301 A2 Without international search report and to be republished upon receipt of that report.

Search Rpt 20010719 Late publication of international search report

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Examination 20020704 Request for preliminary examination prior to end of 19th month from priority date

22/5/20 (Item 20 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00775509 \*\*Image available\*\*

VASCULAR DEVICE FOR EMBOLI, THROMBUS AND FOREIGN BODY REMOVAL AND  
METHODS OF USE  
DISPOSITIF VASCULAIRE PERMETTANT LE RETRAIT DES EMOLES, DES THROMBUS ET  
DES CORPS ETRANGERS ET PROCEDES D'UTILISATION

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200108743 A1 20010208 (WO 0108743)  
Application: WO 2000US20754 20000728 (PCT/WO US0020754)  
Priority Application: US 99364064 19990730; US 99430211 19991029; US  
99470681 19991223; US 99470682 19991223; US 99470703 19991223; US  
99470857 19991223; US 2000611428 20000707

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DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ  
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG  
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-029/00

Publication Language: English

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Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 15808

English Abstract

Apparatus (20) is provided for use in filtering emboli from a vessel ;  
and/or performing thrombectomy, and embolectomy. A vascular device (50)  
comprises one or more support hoops (263, 264) connected near a distal  
end of a guide wire (252), and a blood permeable sac (258) affixed to  
the support hoop or hoops to form a mouth of the blood permeable sac. The  
mouth of the sac closes when the apparatus is collapsed for removal to  
prevent material from escaping from the sac.

French Abstract

La presente invention concerne un appareil (20) qui permet de filtrer les  
embolies contenus dans un vaisseau et/ou d'effectuer une thrombectomie et  
une embolectomie. Un dispositif vasculaire (50) comprend un ou  
plusieurs arceaux de soutien (263, 264) relies a proximite de l'extremite

distale d'un fil guide (252), et un sac permeable au sang (258) fixe sur l'arceau ou les arceaux de soutien afin de former l'ouverture du sac permeable au sang. L'ouverture du sac se ferme lorsque l'appareil se trouve en position affaissee afin d'empecher que de la matiere s'echappe du sac.

Legal Status (Type, Date, Text)

Publication 20010208 A1 With international search report.

Examination 20010628 Request for preliminary examination prior to end of 19th month from priority date

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DIALOG(R) File 349:PCT FULLTEXT  
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00763382 \*\*Image available\*\*  
METHODS AND LOW PROFILE APPARATUS FOR REDUCING EMBOLIZATION DURING  
TREATMENT OF CAROTID ARTERY DISEASE  
METHODES ET APPAREIL A CONFIGURATION PLATE PERMETTANT DE REDUIRE LES  
RISQUES D'EMBOLIE LORS DU TRAITEMENT D'UNE AFFECTION DE L'ARTERE  
CAROTIDE

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200076390 A2-A3 20001221 (WO 0076390)  
Application: WO 2000US16393 20000614 (PCT/WO US0016393)  
Priority Application: US 99333074 19990614; US 99155120 19990922; US  
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DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC  
LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI  
SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-029/00

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 8534

English Abstract

Methods and apparatus are provided for removing emboli during an angioplasty, stent, or surgical procedure comprising a catheter (11) having an occlusion element (10), an aspiration lumen, a blood outlet port in communication with the lumen, a guide wire (20) having a balloon, a venous return catheter with a blood inlet port (51), and tubing that couples the blood outlet port (48) to the blood inlet port. A blood filter (50), a flow sensor, a flow control valve (175). A pump may also be included in-line with the tubing to better facilitate filtering of emboli from blood reperfed into the patient, to better monitor, and control the degree of flow reversal.

French Abstract

L'invention concerne des methodes et un appareil permettant d'eliminer les embolies au cours d'interventions chirurgicales telles que l'angioplastie ou la mise en place d'une prothese endovasculaire. Ledit appareil comprend un catheter pourvu d'un element d'occlusion, d'une

lumiere d'aspiration et d'un orifice de sortie du sang communiquant avec la lumiere, un fil guide pourvu d'un ballonnet, un **catheter** de retour **veineux** pourvu d'un orifice d'entree du sang, et des tubulures couplant l'orifice de sortie du sang a l'orifice d'entree du sang. L'appareil selon l'invention peut egalement comporter un hemofiltre, un detecteur de debit, une valve de regulation du debit, et/ou une pompe, disposees en ligne avec les tubulures de maniere a permettre d'une part, un meilleur filtrage des embolies eventuellement presents dans le sang reperfuse au patient et d'autre part, une surveillance et une regulation ameliorees du degre de reflux.

Legal Status (Type, Date, Text)

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Republication 20020117 A3 With international search report.



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00737127 \*\*Image available\*\*

METHODS AND DEVICES FOR OCCLUDING A VESSEL AND PERFORMING DIFFERENTIAL PERFUSION

METHODES ET DISPOSITIFS D'OCCLUSION D'UN VAISSEAU ET DE PERFUSION DIFFERENTIELLE

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Priority Application: US 99256263 19990223

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ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT  
UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

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Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11662

English Abstract

The present invention includes an apparatus and methods for differentially perfusing a patient undergoing cardiopulmonary bypass. A cardiopulmonary bypass machine is configured to provide hypothermic oxygenated blood and normothermic oxygenated blood to an aortic balloon catheter. The catheter has arch perfusion ports and corporeal perfusion ports and is introduced into a patient's aorta and navigated transluminally until the occlusion balloon is located in the descending aorta. The occlusion balloon is inflated and hypothermic oxygenated blood is perfused to the arch vessels while normothermic oxygenated blood is perfused to the corporeal circulation. This procedure offers the benefit of cerebral protection from embolic events during cardiopulmonary bypass surgery.

French Abstract

La presente invention concerne un appareil et des methodes permettant la perfusion differentielle d'un patient place sous circulation extra-corporelle. Une machine de circulation extra-corporelle est configuree pour fournir du sang oxygene hypothermique et du sang oxygene

normothermique a un **catheter** intra-aortique a ballonnet. On introduit ce **catheter** , qui comporte des orifices de **perfusion** dans la crosse et des orifices de **perfusion** corporelle, dans l'aorte du patient et on le deplace de maniere transluminale jusqu'a ce que le ballonnet d'occlusion soit positionne dans l'aorte descendante. Le ballonnet d'occlusion est alors gonfle et le sang oxygene hypothermique est injecte dans les vaisseaux aortiques tandis que le sang oxygene normothermique est injecte dans la circulation corporelle. Cette **procedure** offre l'avantage de proteger le cerveau contre des evenements emboliques au cours d'une intervention chirurgicale destinee a la mise en place d'une circulation extra-corporelle.

Legal Status (Type, Date, Text)

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00736595

**MULTICHANNEL CATHETER WITH OBTURATOR  
CATHETER A PLUSIEURS CANAUX ET A OBTURATEUR**

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Patent and Priority Information (Country, Number, Date):

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DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US UZ VN YU ZA ZW  
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE  
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: A61M-025/10

Publication Language: English

Filing Language: English

Fulltext Availability:

Detailed Description  
Claims

Fulltext Word Count: 19195

**English Abstract**

This invention is a multichannel **catheter** for extracorporeal circulation of blood to a patient undergoing cardiovascular treatments or surgery. The **catheter** has three independent channels, an obturator and an expandable **balloon** at one end of the **catheter**. The first channel is the largest and is of a size that allows for delivery of blood through **outlet** parts in the wall of the first channel to a patient in an amount sufficient to maintain the patient's metabolism and **perfusion** throughout the treatment or surgery. The obturator is longitudinally **insertable** into the first channel. A second channel, smaller than the first, is integrated into the wall of the first channel, and is suitable for delivering a biologically active fluid (e.g., for cardioplegia) to the heart and/or venting the left heart. A third channel, also smaller than the first, is integrated into the wall of the first channel, and suitable for delivering a fluid to the **balloon** for its expansion when positioned in the ascending aorta to occlude the flow of blood to the heart. The **catheter** provides an improved means of preparing for or performing cardiovascular surgery on a patient using a cardiopulmonary machine for extracorporeal circulation of blood. The **catheter** is

particularly useful for cardiac surgery.

French Abstract

L'invention concerne un **catheter** a plusieurs canaux, utilise pour la circulation extracorporelle du sang chez un patient subissant un traitement ou une operation cardio- **vasculaire** . Le **catheter** comporte trois canaux independants, un obturateur et un ballonnet gonflable a une extremite. Le premier canal est le plus grand et sa dimension lui permet d'amener le sang, par des orifices de sortie dans la paroi du premier canal, dans l'organisme d'un patient en une quantite suffisante pour maintenir le metabolisme du patient et l'irrigation sanguine durant tout le traitement ou toute l'intervention. L'obturateur peut etre introduit de maniere longitudinale dans le premier canal. Un deuxieme canal, plus petit que le premier, est integre dans la paroi du premier canal et sert a amener un fluide biologique actif (p.ex. dans le cas d'une cardioplegie) vers le coeur et/ou vider le coeur gauche. Un troisieme canal (38), egalement plus petit que le premier, est integre dans la paroi du premier canal, et sert a amener un fluide dans le ballonnet pour que celui-ci puisse se gonfler lorsqu'il est place dans l'aorte ascendante afin de bloquer l'ecoulement sanguin en direction du coeur. Le **catheter** de l'invention constitue un instrument ameliore qui permet de preparer ou d'effectuer une intervention cardio- **vasculaire** sur un patient au moyen d'une machine cardio-pulmonaire utilisee pour la circulation extracorporelle du sang. Ce **catheter** est particulierement utile lors d'operations du coeur.

Legal Status (Type, Date, Text)

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Search Rpt	20010125	Late publication of international search report
Examination	20010712	Request for preliminary examination prior to end of 19th month from priority date

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00565683

**FLUID DELIVERY APPARATUS AND METHODS**

**PROCEDES ET APPAREIL DE DISTRIBUTION DE FLUIDE**

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Patent and Priority Information (Country, Number, Date):

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Priority Application: US 98196636 19981119; US 99312201 19990514

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DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW  
AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC  
NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

Main International Patent Class: A61M-025/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 30934

**English Abstract**

An infusion/guide catheter which is adapted to be introduced into a coronary ostium of a coronary artery of the heart of a patient through an opening in an aorta of the patient, preferably without the aid of fluoroscopic guidance, for delivery of a fluid, such as a cardioplegia solution, or passage of a catheter, into the coronary artery while still permitting blood perfusion from the aorta in to the ostium. Catheters adapted to be passed into a coronary vessel for delivery of a fluid, such as a cardioplegia solution. Preferably, the catheters can be placed without the use of fluoroscopy, although fluoroscopy may be optionally used under certain circumstances. In one embodiment, the infusion catheter generally comprises a tube having at least one lumen, a proximal end, and a distal end, the tube having at least one bend to facilitate placement of the distal end of the tube into the ostium of the coronary artery when the proximal end of the tube extends from the opening in the aorta, wherein the distal end of the tube is configured to fit within the coronary ostium while still permitting blood perfusion from the aorta into the ostium. The infusion catheter can be used as a system in conjunction with an intravascular catheter, an intraluminal shunt or similar drug delivery device which can be inserted directly into a coronary vessel, such as the right or left coronary artery or vein, following cardioplegia administration through the infusion catheter. The

intravascular catheter, intraluminal shunt or similar drug delivery device can be used to deliver a fluid, such as a cardioplegia solution, more locally in the heart to enhance the efficiency of fluid or drug administration. Several embodiments include a light delivery portion capable of illuminating a distal end of the catheter for visualization thereof through the vasculature. A guidewire having a light delivery portion is also capable of illuminating a distal end of a catheter for placement of the catheter in a coronary vessel without the use of fluoroscopy.

#### French Abstract

L'invention concerne un catheter de guidage/infusion conçu pour être introduit dans l'ostium coronarien d'une artère coronaire du cœur d'un patient, par l'intermédiaire d'une ouverture ménagée dans l'aorte dudit patient, de préférence sans l'aide d'un guidage fluoroscopique, permettant de distribuer un fluide, tel qu'une solution de cardioplegie, ou de faire passer un catheter dans l'artère coronaire tout en effectuant une perfusion sanguine de l'aorte dans l'ostium. Ces catheters sont conçus pour être introduits dans un vaisseau coronaire pour y distribuer un fluide, tel qu'une solution de cardioplegie. Le catheter est, de préférence, introduit sans utiliser la fluoroscopie, bien qu'on puisse l'utiliser dans certaines circonstances. Selon un mode de réalisation, le catheter d'infusion comprend généralement un tube pourvu d'au moins une lumière, une extrémité proximale, et une extrémité distale, ledit tube possédant au moins une courbure afin de faciliter le placement de l'extrémité distale du tube dans l'ostium de l'artère coronaire, lorsque l'extrémité proximale du tube s'étend depuis l'ouverture dans l'aorte, l'extrémité distale du tube étant configurée de manière à correspondre à l'ostium coronarien, tout en effectuant une perfusion sanguine de l'aorte dans l'ostium. Le catheter d'infusion peut être utilisé dans un système avec un catheter intravasculaire, un dispositif de pontage intraluminal ou un dispositif de distribution de médicaments similaire pouvant être directement introduit dans un vaisseau coronaire, tel que l'artère coronaire gauche ou droite, une veine, après une administration de cardioplegie par l'intermédiaire du catheter d'infusion. Le catheter intravasculaire, le dispositif de pontage intraluminal ou le dispositif de distribution de médicaments similaire peuvent être utilisés pour distribuer un fluide, tel qu'une solution de cardioplegie, plus localement dans le cœur afin d'améliorer l'efficacité ou l'administration d'un fluide ou d'un médicament. Plusieurs modes de réalisation, comprennent une partie de distribution de lumière capable d'éclairer une extrémité distale du catheter afin de visualiser ledit catheter dans le système vasculaire. Un fil de guidage pourvu d'une partie de distribution de lumière peut également éclairer une extrémité distale d'un catheter afin de placer ledit catheter dans un vaisseau coronaire sans recours à la fluoroscopie.

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DIALOG(R)File 349:PCT FULLTEXT  
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00498011 \*\*Image available\*\*

**AORTIC CATHETER AND METHODS FOR INDUCING CARDIOPLEGIC ARREST AND FOR  
SELECTIVE AORTIC PERFUSION**

**CATHETER AORTIQUE ET PROCEDES POUR L'INDUCTION D'UN ARRET PAR CARDIOPLEGIE  
ET POUR PERMETTRE UNE PERFUSION AORTIQUE SELECTIVE**

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Patent and Priority Information (Country, Number, Date):

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Application: WO 98US25846 19981204 (PCT/WO US9825846)

Priority Application: US 9767945 19971208

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FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ  
VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW  
ML MR NE SN TD TG

Main International Patent Class: A61M-025/10

International Patent Class: A61B-017/12

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11784

#### English Abstract

The present invention provides an aortic catheter having an upstream occlusion member positioned in the ascending aorta between the coronary arteries and the brachiocephalic artery<sup>0</sup> and a downstream anchoring member positioned in the descending aorta, downstream of the aortic arch. The upstream occlusion member may be an inflatable balloon or a selectively deployable external catheter valve. The downstream anchoring member may be a larger inflatable balloon or other anchoring structure that provides sufficient friction to prevent migration of the balloon catheter in the upstream or downstream direction. In addition, an arch perfusion lumen, a corporeal perfusion lumen and a cardioplegia lumen are provided for performing selective perfusion and cardioplegic arrest.

#### French Abstract

L'invention concerne un catheter aortique ayant un element d'occlusion d'amont positionne dans l'aorte descendante, entre les arteres coronaires et l'artere brachiocephalique, et un element d'ancrage d'aval positionne dans l'aorte descendante, en aval de la crosse aortique. L'element d'occlusion d'amont peut etre un ballonnet gonflable ou une valve de catheter externe a deploiement selectif. L'element d'ancrage d'aval peut etre un ballonnet gonflable plus grand ou une autre structure d'ancrage produisant suffisamment de frottement pour empecher la migration du catheter a ballonnet vers l'aval ou vers l'amont. De plus, une lumiere de perfusion dans la crosse, une lumiere de perfusion corporelle et

une lumiere de cardioplegie sont prévues pour permettre la perfusion selective et l'arrêt par cardioplegie.



22/5/36 (Item 36 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00483875 \*\*Image available\*\*

**MAIN STAGE CATHETERIZATION INSTRUMENT**  
**INSTRUMENT DE CATHETERISATION DE PHASE PRINCIPALE**

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SAMSON Wilfred J,

Inventor(s):

MACOVIK John A,  
SAMSON Wilfred J,

Patent and Priority Information (Country, Number, Date):

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Priority Application: US 9760127 19970926

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FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US  
UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE  
CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN  
GW ML MR NE SN TD TG

Main International Patent Class: A61M-029/02

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 14197

**English Abstract**

The present invention discloses a main stage **catheter** instrument which serves as the primary **catheterization** access and arterial **perfusion cannula** for establishing cardiopulmonary bypass with selective **perfusion** and differential flow management of the cardiovascular, cardioneural and corporeal sub-circulations of a patient. The main stage **catheter** has a **catheter** shaft with a first occlusion member for occluding the thoracic descending aorta and an optional second occlusion member for occluding the abdominal descending aorta. A **perfusion lumen** in the main stage **catheter** supplies oxygenated blood to the aorta through distal, medial and proximal **perfusion** ports. Optionally, a second stage **catheter** inserted through the main stage **catheter** may be used to occlude the ascending aorta and to deliver a cardioplegic agent to the coronary **arteries**. The main stage **catheter** is coupled to a cardiopulmonary bypass **system** and a venous drainage **catheter** to establish partial or full cardiopulmonary bypass with elective cardioplegic arrest.

**French Abstract**

Cette invention se rapporte a un instrument a **catheter** de phase chirurgicale principale, qui sert de canule primaire de **perfusion arterielle** et d'accès de **catheterisation**, en vue d'établir une dérivation cardio-pulmonaire avec gestion de flux différentiel et d'injection sélective des sous- **systemes** de circulation sanguine cardio-vasculaire, cardio-neurale et corporelle d'un patient. Ce **catheter** de phase principale comprend une tige de **catheter** ayant un premier élément d'occlusion servant à boucher l'aorte thoracique descendante et un second élément d'occlusion optionnel servant à boucher l'aorte abdominale descendante. Un **passage** d'injection dans ce **catheter** de phase

principale fournit du sang oxygene a l'aorte par des orifices d'injection distal, intermediaire et proximal. Un **catheter** de phase secondaire, introduit dans le **catheter** de phase principale, peut eventuellement etre utilise pour boucher l'aorte ascendante et pour administrer un agent cardioplegique dans les arteres coronaires. Le **catheter** de phase principale est couple a un **systeme** de derivation cardio-pulmonaire et a un **catheter** de drainage **veineux** , en vue d'etablir une derivation cardio-pulmonaire partielle ou totale avec arret cardioplegique selectif.

22/5/37 (Item 37 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00483874 \*\*Image available\*\*

**INTRALUMINAL CATHETER WITH EXPANDABLE TUBULAR OPEN-WALLED ELEMENT**  
**CATHETER INTRALUMINAL POURVU D'UN ELEMENT TUBULAIRE DEPLOYABLE A PAROI**  
**OUVERTE**

Patent Applicant/Assignee:

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JORDANA Jorge Luis,

Inventor(s):

NAVIA Jose Antonio,  
JORDANA Jorge Luis,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9915226 A1 **19990401**

Application: WO 98IB1460 19980921 (PCT/WO IB9801460)

Priority Application: US 97935783 19970923

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FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD  
MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ  
VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH  
CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW  
ML MR NE SN TD TG

Main International Patent Class: **A61M-029/02**

International Patent Class: A61B-017/12

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 6283

English Abstract

An intraluminal **catheter** having an expandable tubular open-walled element for immobilizing at least part of the **catheter** within a patient's body **lumen**, generally comprising an elongated shaft and a tubular open-walled element secured to the shaft, wherein the tubular open-walled element is at least in part expandable from an unexpanded diameter to a larger expanded diameter within the body **lumen**. The expanded diameter configuration is configured to contact a wall defining the body **lumen** and thereby releasably secure at least part of the **catheter** within the body **lumen**. A **cannula** member, used for delivering or removing fluids from the body **lumen**, can be positioned in one or more optimal **perfusion** locations within the body **lumen** during use, independent of the secured site. When occlusion of the axial flow is necessary, an optional occluding member may be reversibly deployed so that it expands inside and against the expanded tubular open-walled element. The optimal occlusion site can also be chosen independently of the secured site.

French Abstract

La presente invention concerne un **catheter** intraluminal pourvu d'un element tubulaire deployable a paroi ouverte destine a immobiliser au moins une partie du **catheter** a l'interieur de la lumiere anatomique du patient. Ce **catheter** comprend une tige de forme allongee et un element tubulaire a paroi ouverte, fixe a la tige. Cet element tubulaire est capable de se deployer, au moins partiellement d'un diametre non deploye en un diametre deploye plus grand a l'interieur de la lumiere anatomique. La configuration a diametre deploye est agencee de facon a etabli un contact avec une paroi definissant la lumiere anatomique et partant a

fixer de facon liberable au moins une partie du **catheter** dans la lumiere anatomique. Une canule, servant a administrer ou eliminer des fluides de la lumiere anatomique, peut etre disposee en un ou plusieurs points de **perfusion** optimale a l'interieur de la lumiere anatomique pendant l'utilisation, quel que soit le site de fixation. Des que l'occlusion du flux axial devient necessaire, on a la possibilite de deployer de facon reversible un organe d'occlusion facultatif de facon qu'il se deploie de facon reversible contre et a l'interieur de l'element tubulaire deploye a paroi ouverte. Il est egalement possible de choisir le site d'occlusion independamment du site de fixation.

22/5/40 (Item 40 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00457094 \*\*Image available\*\*

**ANTEGRADE CARDIOPLEGIA CATHETER AND METHOD**

**CATHETER DESTINE A PROVOQUER UNE CARDIOPLEGIE ANTEROGRADE ET TECHNIQUE  
AFFERENTE**

Patent Applicant/Assignee:

HEARTPORT INC,

Inventor(s):

ST GOAR Frederick G,  
STEVENS John H,  
GIFFORD Hanson S III,  
GRIFFITH Bartley P,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9847558 A1 19981029

Application: WO 98US8174 19980422 (PCT/WO US9808174)

Priority Application: US 97839189 19970423

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PT SE

Main International Patent Class: A61M-029/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 11486

**English Abstract**

A cardioplegia catheter (20) is configured to extend into the ascending aorta with a proximal portion of the shaft (26) extending into a left chamber of the heart through the aortic valve, and out of the heart through a penetration in a wall thereof. The cardioplegia catheter has an occlusion member (28) thereof. The cardioplegia catheter has an occlusion member (28) configured to occlude the ascending aorta between the brachycephalic artery, and the coronary ostia. An arterial return cannula delivers oxygenated blood to the arterial system downstream of the occlusion member, while cardioplegia fluid is delivered through a lumen in the cardioplegia catheter (20) upstream of the occlusion member to induce cardioplegia arrest.

**French Abstract**

Ce catheter (20) destine a provoquer une cardioplegie est concu pour se deployer dans l'aorte descendante, une partie proximale de la tige (26) se deployant dans une cavite gauche du coeur par la valvule sigmoide et sortant du coeur par une perforation pratquee dans une paroi cardiaque. Ce catheter possede un element d'occlusion (28) destine a obturer l'aorte descendante entre l'artere brachycephale et les orifices coronaires. Une canule arterielle de retour alimente en sang oxygene le systeme arteriel, en aval de l'element d'occlusion, tandis qu'un fluide a cardioplegie est administre par le biais d'une lumiere situee dans le catheter (20) et ce, en amont de l'element d'occlusion afin de provoquer cette cardioplegie.

22/5/43 (Item 43 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00414915 \*\*Image available\*\*

RETROGRADE - ANTEGRADE CATHETERIZATION GUIDE WIRE  
FIL DE GUIDAGE DE CATHETERISME RETROGRADE -ANTEROGRADE

Patent Applicant/Assignee:

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GRIFFIN Mark A,

Inventor(s):

COPE Constantin,  
GRIFFIN Mark A,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9805376 A1 19980212

Application: WO 97US13511 19970731 (PCT/WO US9713511)

Priority Application: US 96692568 19960806

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FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN  
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU  
ZW GH KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES  
FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD  
TG

Main International Patent Class: A61M-025/09

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 7257

English Abstract

An **catheterization** apparatus (10) for reversing the **retrograde** or **antegrade** direction of **catheterization** includes a **guide wire** (12) foldable upon itself for partial introduction into a **vessel** (68) of a patient. The **guide wire** (12) first includes a resilient, elongated member (14) having a curved end (16) and a remainder (17) having a second, bent end (18). The **guide wire** (12) also includes a flexible tether (22) connected to the tip (20) of the curved end (16) of the elongated member (14). The elongated member (14) is preferably formed from a wire core or mandrel (24) covered by a continuous coiled wire (30). The **catheterization** apparatus (10) preferably further includes a **catheter** through which the **guide wire** (12) is introduced into the **vessel** (68). The **catheter** can be of conventional construction and operability. Preferably, however, the **catheter** is a highly flexible and relatively short intermediary **catheter** (56), employed only temporarily during use of the **retrograde - antegrade guide wire** (12). The **catheterization** apparatus (10) can also include an **insertion** sheath (60) engageable with the **catheter** (56) to facilitate **passage** of the **guide wire** (12) through the **catheter** (56). The apparatus (10) is particularly advantageous in that its use avoids the need to establish a second access site. Moreover, the apparatus (10) is relatively simple and reliable in construction and use, and is relatively low in cost, at least in comparison to the costs and risks of the establishment of a second access site. The apparatus (10) is a traumatic during use, that is, it does not significantly damage the blood **vessel** or other **vessel** during reversal of the direction of **catheterization**. The apparatus (10) is useful in **vessels** of both large and small diameters, and facilitates the selective engagement of a **catheter** with a bifurcation branch in a **vessel**.

#### French Abstract

Ce dispositif de **catheterisme** (10), destine a inverser la direction **retrograde** ou anterograde du **catheterisme**, comprend un fil de guidage (12) pliable sur lui-meme, aux fins d'introduction partielle dans un vaisseau (68) d'un patient. Ce fil (12) comporte un element flexible et de forme allongee (14) presentant une extremite courbe (16), le reste (17) du fil presentant une seconde extremite (18) pliee. Ce fil (12) comporte egalement un cable de fixation (22) relie au bout (20) de l'extremite courbe (16). L'element de forme allongee (14) est, de preference, forme a partir d'une ame ou mandrin (24) recouvert d'un fil continu enroule (30). De preference, ce dispositif de **catheterisme** (10) comprend encore un **catheter** a travers lequel on introduit le fil de guidage (12) dans le vaisseau (68). Ce **catheter** peut etre de conception et maniabilite classiques, toutefois, on prefere qu'il soit un **catheter** (56) intermediaire relativement court et tres flexible, employe seulement temporairement pendant l'utilisation du fil de guidage **retrograde** -anterograde (12). Le dispositif de **catheterisme** (10) peut encore comporter une gaine d' **insertion** (60) pouvant etre introduite avec le **catheter** (56) afin de faciliter le **passage** du fil de guidage a travers le **catheter** (56). Ce dispositif (10) est particulierement avantageux en ce que son utilisation supprime le besoin d'etablir un second site d'acces. En outre, ce dispositif (10) est relativement simple a construire et fiable dans son maniemment, son cout est relativement bas, au moins par rapport aux couts et risques de l'etablissement d'un second site d'acces, son utilisation est atraumatique, c'est-a-dire qu'il n'endommage pas de maniere importante le vaisseau sanguin ou tout autre vaisseau lors de l'inversion de la direction du **catheterisme**, il est utile dans des vaisseaux a grand et petit diametre et il facilite l'introduction selective, dans un vaisseau, d'un **catheter** presentant une branche de bifurcation.

22/5/45 (Item 45 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00387154 \*\*Image available\*\*

A DEVICE, SYSTEM AND METHOD FOR INTERSTITIAL TRANSVASCULAR INTERVENTION  
DISPOSITIF, SYSTEME ET PROCEDE D'INTERVENTION TRANSVASCULAIRE  
INTERSTITIELLE

Patent Applicant/Assignee:

TRANSVASCULAR INC,  
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Inventor(s):

MAKOWER Joshua,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9727897 A1 19970807

Application: WO 97US1459 19970131 (PCT/WO US9701459)

Priority Application: US 9610614 19960202

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FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW  
MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN KE LS MW  
SD SZ UG AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT  
LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61M-029/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 13750

#### English Abstract

This invention is devices, systems and methods for trans-vascular interstitial interventions, including trans-vascular, catheter based vascular bypass, transmyocardial re-vascularization, bypass grafting of blood vessels, and interstitial surgical/interventional procedures wherein a catheter is advanced trans-luminal through the vasculature (2) to a desired location (OB) and an operative instrument (5) is passed through the wall (2) of a blood vessel (2) and to a target location (3) (e. g., another blood vessel, an organ, a tumor, another anatomical structure) such that one or more operative devices may be advanced to the target location to perform the desired operative or interventional procedure.

#### French Abstract

Dispositifs, systemes et procedes pour interventions interstitielles transvasculaires, qui incluent le pontage vasculaire transvasculaire utilisant un catheter, la revascularisation transmyocardique, le pontage par greffe de vaisseaux sanguins, et les interventions/operations chirurgicales interstitielles dans lesquelles un catheter est introduit de maniere transluminale dans le systeme vasculaire (2) jusqu'a un site desire (OB) et un instrument operatoire (5) est introduit par la paroi (2) d'un vaisseau sanguin (2) jusqu'a un site cible (3) (par ex. un autre vaisseau sanguin, un organe, une tumeur, une autre structure anatomique) de maniere a ce qu'un ou plusieurs dispositifs operatoires puissent etre achemines jusqu'au site cible pour effectuer l'intervention ou l'operation desiree.



22/5/48 (Item 48 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00357833 \*\*Image available\*\*  
ENDOVASCULAR SYSTEM FOR ARRESTING THE HEART  
SYSTEME ENDOVASCULAIRE D'ARRET DU COEUR

Patent Applicant/Assignee:  
HEARTPORT INC,

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CORVI Timothy C,  
DONLON Brian S,  
BOYD Stephen W,  
FAN Sylvia W,  
ROTH Alex T,  
PETERS William S,  
MUELLER Richard J Jr,  
GIFFORD Hanson S III,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9640347 A1 19961219  
Application: WO 96US8078 19960530 (PCT/WO US9608078)  
Priority Application: US 95486216 19950607

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT  
SE

Main International Patent Class: A61M-029/00

Publication Language: English

Fulltext Availability:

Detailed Description  
Claims

Fulltext Word Count: 23018

#### English Abstract

Devices and methods are provided for temporarily inducing cardio-plegia arrest in the heart of a patient, and for establishing cardiopulmonary bypass in order to facilitate surgical procedures on the heart and its related blood vessels. Specifically, a catheter-based system is provided for isolating the heart and coronary blood vessels of a patient from the remainder of the arterial system (850), and for infusing a cardio-plegia agent into the patient's coronary arteries to induce cardio-plegia arrest in the heart. The system includes an endo-aortic partitioning catheter (10) having an expandable balloon (11, 161) at its distal end, which is expanded within the ascending aorta (12, 157) to occlude the aortic lumen between the coronary ostia and the brachio-cephalic artery. Means for centering the catheter tip (330) within the ascending aorta include specially curved shaft configurations (1600), eccentric (710) or shaped (792) occlusion balloons (161, 350), and a steerable catheter tip (145) which may be used separately or in combination. The shaft of the catheter may have a coaxial (106) or multilumen (602) construction.

#### French Abstract

L'invention concerne des dispositifs et des procedes servant a provoquer un arret cardioplegique temporaire du coeur d'un patient et a creer une derivation cardio-pulmonaire, de maniere a faciliter les interventions chirurgicales pratiquées sur le coeur et sur ses vaisseaux sanguins. Un systeme a base de catheters sert a isoler le coeur et les vaisseaux sanguins coronaires d'un patient du reste du systeme arteriel (850), ainsi qu'a introduire par perfusion un agent cardioplegique dans les arteres coronaires, afin de provoquer un arret cardioplegique du coeur. Ce systeme comprend un catheter de separation endoaortique (10), dont

l'extremite distale est pourvue d'un ballonnet (11)(161) dilate a l'interieur de l'aorte montante (12)(157), de maniere a obturer la lumiere aortique entre les orifices coronaires et l'artere brachiocephalique. Des moyens servant a centrer la pointe (330) du catheter a l'interieur de l'aorte montante possedent des configurations de tige a incurvations speciales (1600), des ballonnets d'occlusion (161)(350) excentriques (710) ou a forme adaptee (792) et une pointe de catheter orientable (145) qu'on peut utiliser separement ou dans une combinaison. La tige du catheter peut presenter une conception coaxiale (106) ou a lumieres multiples (602).

22/5/49 (Item 49 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00347559 \*\*Image available\*\*

**SYSTEM AND METHODS FOR PERFORMING ENDOVASCULAR PROCEDURES  
SYSTEME ET PROCEDES POUR EFFECTUER DES ACTES ENDOVASCULAIRES**

Patent Applicant/Assignee:

HEARTPORT INC,

Inventor(s):

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PETERS William S,  
STERMAN Wesley D,  
GIFFORD Hansen S III,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9630072 A1 19961003

Application: WO 96US3266 19960311 (PCT/WO US9603266)

Priority Application: US 95415366 19950330

Designated States: AU CA JP AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT  
SE

Main International Patent Class: A61M-029/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 18148

**English Abstract**

This invention is a system for inducing cardio-plegia arrest and performing an endovascular procedure within the heart or blood vessels of a patient. An endo-aortic partitioning catheter (10) has an inflatable balloon (11) which occludes the ascending aorta (12) when inflated. Cardio-plegia fluid may be infused through a lumen of the endo-aortic partitioning catheter (39) to stop the heart while the patient's circulatory system is supported on cardiopulmonary bypass. One or more endovascular devices (500) are introduced through an internal lumen (40) of the endo-aortic partitioning catheter (30) to perform a diagnostic or therapeutic endovascular procedure within the heart or blood vessels of the patient. Surgical procedures such as coronary artery bypass surgery or heart valve replacement may be performed in conjunction with the endovascular procedure while the heart is stopped. Embodiments of the system are described for performing, e.g., fiberoptic angiography of structures within the heart and its blood vessels, and valvuloplasty for correction of valvular stenosis.

**French Abstract**

Cette invention concerne un systeme pour provoquer une cardioplegie et pour effectuer un acte endovasculaire au niveau du coeur ou des vaisseaux sanguins d'un patient. Un catheter (10) d'isolement aortique comprend un ballonnet gonflable (11) qui bloque l'aorte ascendante (12) quand il est gonfle. Le fluide pour provoquer une cardioplegie peut etre injecte par la lumiere du catheter d'isolement endo-aortique (39) pour arreter le coeur pendant que le systeme circulatoire du patient est pris en charge par une derivation cardiopulmonaire. Un ou plusieurs dispositifs endovasculaires (500) sont introduits par la lumiere interieure (40) du catheter d'isolement endo-aortique (30) pour effectuer un acte endovasculaire diagnostique ou therapeutique dans le coeur ou les vaisseaux sanguins du patient. Des operations chirurgicales telles que des operations de pontage sur les arteres coronaires ou le remplacement de valvules pendant l'acte endovasculaire peuvent etre effectuees pendant que le coeur est arrete. Des formes d'execution sont decrites pour

effectuer une angioscopie par fibre optique de structures a l'interieur du coeur et de ses vaisseaux et une valvuloplastie pour corriger une stenose valvulaire.

22/5/50 (Item 50 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00338977 \*\*Image available\*\*  
RETROGRADE DELIVERY CATHETER AND METHOD FOR INDUCING CARDIOPLEGIC  
ARREST

CATHETER D'ADMINISTRATION PAR VOIE RETROGRADE ET PROCEDE POUR INDUIRE  
UNE CARDIOPLEGIE

Patent Applicant/Assignee:  
HEARTPORT INC,

Inventor(s):  
BOYD Stephen W,  
STEVENS John H,  
EVARD Philip C,  
ADAMS Craig L,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9621489 A1 19960718

Application: WO 95US16169 19951208 (PCT/WO US9516169)

Priority Application: US 95372741 19950112

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Main International Patent Class: A61M-029/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 12157

#### English Abstract

A **retrograde** delivery **catheter** (10) includes at its distal end a **balloon** (11) configured to occlude the coronary sinus (21) of a patient's heart, and has a length and flexibility which allow the distal end to be positioned in the coronary sinus (21) with the proximal end extending trans-luminal to a peripheral **vein** such as an internal jugular **vein** (44) and out of the body through a puncture (24) therein. The delivery **catheter** (20) has a delivery **lumen** (128) extending between its proximal and distal ends which is configured to allow a cardioplegia fluid to be delivered at a flow rate of at least 200 ml/min with a pump pressure less than 300 mm Hg, thereby allowing cardioplegia arrest to be maintained using a blood cardioplegia fluid without causing excessive hemolysis. In a **method** of inducing cardioplegia arrest according to the invention, the patient is placed on cardiopulmonary bypass (18), the coronary **arteries** (50, 51) are isolated from remainder of the arterial **system**, and the delivery **catheter** (10) is positioned trans-luminal in the coronary sinus (21) from a peripheral **vein**.

#### French Abstract

**Catheter** (10) d'administration par voie **retrograde** ayant a son extremite distale un ballonnet (11) configure de facon a occlure le sinus coronaire (21) du coeur d'un patient, et dont la longueur et la souplesse permettent de positionner l'extremite distale dans le sinus coronaire (21), l'extremite proximale s'etendant de maniere transluminale jusqu'a une **veine** peripherique telle que la **veine** jugulaire interne (44), et hors du corps par une ponction (24) pratquee dans ce dernier. Le **catheter** d'administration (20) presente une lumiere d'administration (128) qui s'etend entre ses extremités proximale et distale, lumiere configuree de facon a permettre l'administration d'un liquide de cardioplegie a un debit d'au moins 200 ml/min avec une pression de refoulement de pompe inferieure a 300 mm Hg, ce qui permet le maintien de la cardioplegie a l'aide d'un liquide sanguin de cardioplegie sans

provoquer une hemolyse excessive. Dans un procede d'induction de la cardioplegie selon l'invention, le patient est place en circulation extra-corporelle (18), les arteres coronaires (50, 51) sont isolees du reste du **systeme arteriel** et le **catheter** d'administration (10) est dispose de facon transluminale dans le sinus coronaire (21) a partir d'une **veine** peripherique.

22/5/52 (Item 52 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00314603 \*\*Image available\*\*

BALLOON CATHETER  
CATHETER A BALLONNET

Patent Applicant/Assignee:

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MARCADIS Stuart J,

Inventor(s):

DEVRIES James H,  
MARCADIS Stuart J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9532756 A1 19951207

Application: WO 95US6753 19950526 (PCT/WO US9506753)

Priority Application: US 94250863 19940527

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IS JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD

SE SG SI SK TJ TM TT UA UG US UZ VN KE MW SD SZ UG AT BE CH DE DK ES FR

GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61M-025/04

International Patent Class: A61M-25:10 ; A61B-17:22

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 7240

English Abstract

A catheter for retrograde perfusion of the heart through the coronary sinus, having an infusion lumen for introducing perfusion liquid into the heart, a retention means such as an inflatable balloon, and optionally having retention enhancements such as spikes, felt or a hydrophilic coating, on the surface of the retention means to keep it firmly in place.

French Abstract

La presente invention concerne un catheter destine a la perfusion retrograde du coeur par le sinus coronaire. Ce catheter est caracterise par une lumiere permettant l'introduction du liquide de perfusion dans le coeur, par un organe de retenue tel qu'un ballonnet gonflable, et de facon facultative par des accessoires ameliorant la retenue tels que des epis, du feutre ou un revetement hydrophile, ces accessoires etant disposes sur la surface des organes de retenue pour les maintenir bien en place.

22/5/53 (Item 53 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00314592

**A CATHETER SYSTEM AND METHOD FOR PROVIDING CARDIOPULMONARY BYPASS PUMP  
SUPPORT DURING HEART SURGERY**

**CATHETER ET PROCEDE DESTINES A APPORTER UN SUPPORT VITAL A L'AIDE D'UNE  
POMPE DE CIRCULATION EXTRA-CORPORELLE, LORS D'UNE CHIRURGIE DU COEUR**

Patent Applicant/Assignee:

SWEEZER William P,

Inventor(s):

SWEEZER William P,

JIMISON James,

COLEMAN Ronald L,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9532745 A1 19951207

Application: WO 95US6796 19950526 (PCT/WO US9506796)

Priority Application: US 94721 19940527

Designated States: AM AT AU BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU

JP KE KG KP KR KZ LK LR LT LU LV MD MG MN MW MX NO NZ PL PT RO RU SD SE

SI SK TJ TT UA UZ VN KE MW SD SZ UG AT BE CH DE DK ES FR GB GR IE IT LU

MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG

Main International Patent Class: A61M-001/10

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 28419

**English Abstract**

A catheter system and method for achieving total cardiopulmonary bypass during heart surgery. The venous perfusion catheter has first and second balloons occluding the inferior and superior vena cava thereby precluding blood flow into the right atrium. An arterial perfusion catheter is inserted, advanced and positioned in the ascending aorta cephalad of the junction of the coronary arteries with the aortic root. A second flexible arterial cannula is mounted in sliding relationship with the first flexible cannula and carries an inflatable balloon adjacent its distal end to provide for occlusion of the ascending aorta. A first flexible cannula has a first lumen and an arterial venting orifice communicating with the first lumen defining a single flow path for the passage of cardioplegia solution to arrest the heart or for the evacuation of blood from the aortic root. A third lumen extends axially through the first flexible arterial cannula and communicates with a multiplicity of openings in the distal tip for suctioning blood from the left ventricle. The second flexible cannula of the arterial perfusion catheter has a first cavity extending axially therethrough that communicates with an opening at its distal tip to permit the passage of blood delivered by the cardiopulmonary bypass pump into arterial circulation. Both the venous and arterial perfusion catheters have a plurality of radially and oppositely spaced steering lumens and a plurality of steering cables fixed to the distal ends to achieve omnidirectional articulation.

**French Abstract**

L'invention concerne un catheter ainsi qu'un procede destines a effectuer une circulation extra-corporelle complete lors d'une chirurgie du coeur. Le catheter de perfusion veineuse possede des premier et second ballonnets servant a occlure la veine cave inferieure et superieure, empechant ainsi le sang de circuler dans l'oreillette droite. On insere, on fait avancer et on place un catheter de perfusion arterielle dans le



tronc cephalique de l'aorte ascendante au niveau de la jonction des arteres coronaires avec l'extremite inferieure de la crosse de l'aorte. Une seconde canule arterielle flexible est montee coulissante par rapport a une premiere canule flexible et elle comporte un ballonnet gonflable situe au voisinage de son extremite distale permettant l'occlusion de l'aorte ascendante. La premiere canule flexible presente une premiere lumiere ainsi qu'un orifice de purge arteriel communiquant avec cette premiere lumiere et definissant un trajet unique de circulation permettant soit le passage de la solution de cardioplegie destinee a arreter le coeur, soit d'evacuer le sang provenant de l'extremite inferieure de la crosse de l'aorte. Une troisieme lumiere s'etend axialement a travers cette premiere canule et communique avec une multiplicité d'ouvertures pratiquées dans l'extremite distale de celle-ci, lesquelles sont destinees a aspirer le sang provenant du ventricule gauche. La seconde canule flexible du catheter de perfusion arterielle presente une premiere cavite qui s'etend axialement a travers cette canule et communique avec une ouverture situee au niveau de l'embout distal de celle-ci afin de permettre au sang amene par la pompe de circulation extra-corporelle de passer dans la circulation arterielle. A la fois le catheter de perfusion veineuse et celui de perfusion arterielle possèdent une pluralite de lumieres de guidage espacees radialement et de facon opposee, ainsi qu'une pluralite de cables de guidage fixes sur leurs extremités distales afin de permettre une articulation omnidirectionnelle.

22/5/54 (Item 54 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
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00163770

**RETROGRADE VENOUS CARDIOPLEGIA CATHETERS AND METHODS OF USE AND MANUFACTURE  
CATHETERS DE CARDIOPLÉGIE VENEUSE RETROGRADE ET PROCÉDES D'UTILISATION ET  
DE FABRICATION**

Patent Applicant/Assignee:

RESEARCH MEDICAL INC,

Inventor(s):

BUCKBERG Gerald D,

TODD Robert J,

Patent and Priority Information (Country, Number, Date):

Patent: WO 8910155 A1 19891102

Application: WO 89US1770 19890427 (PCT/WO US8901770)

Priority Application: US 88230 19880428

Designated States: AT AU BE CH DE DK FR GB IT JP LU NL NO SE

Main International Patent Class: A61M-025/00

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 13657

English Abstract

This invention relates to a retrograde cardioplegia catheter (10) and its method of use. The catheter contains two lumens, an infusion lumen (18) through which the cardioplegic solution flows and a pressure sensing lumen (20) for monitoring the fluid pressure at the point where the solution exits the catheter. A slightly tapered, self-filling balloon (22) is secured to the distal end of the catheter (10). Also, located at the distal end of the catheter is a soft, rounded tip (14) to prevent damage to the sensitive intimal tissues of the coronary sinus (50). A stylet (36) having a handle (38) at one end and a predetermined curve at the other end enables the cardioplegia catheter (10) to be inserted quickly and accurately within the coronary sinus (50) through a very small incision made in the right atrium. After the catheter is secured in place, the stylet is withdrawn.

French Abstract

Cette invention concerne un catheter de cardioplegie retrograde (10) et son procede d'utilisation. Le catheter presente deux passages, un passage de perfusion (18) au travers duquel s'ecoule la solution cardioplegique et un passage de detection de pression (20) pour controler la pression du fluide au point ou la solution sort du catheter. Un ballon legerement conique a auto-remplissage (22) est fixe a l'extremite distale du catheter (10). De meme, une pointe arrondie et douce (14) est fixee a l'extremite distale du catheter pour empecher d'endommager les tissus sensibles du sinus coronaire (50). Un stylet (36) ayant une poignee (38) a une extremite et une courbure predeterminee a l'autre extremite permet d'introduire de maniere precise et rapide le catheter de cardioplegie (10) dans le sinus coronaire (50) au travers d'une tres petite incision pratquee dans l'orifice de l'oreillette droite. Apres avoir fixe le catheter, le stylet est enleve.

Set	Items	Description
S1	3	AU=(GERSHOWITZ A? OR GERSHOWITZ, A? OR GERSHOWITZ A OR GERSHOWITZ, A OR GERSHOWITZ A. OR GERSHOWITZ, A. OR GERSHOWITZ AD OR GERSHOWITZ, AD OR GERSHOWITZ A.D. OR GERSHOWITZ, A.D. OR - GERSHOWITZ ARTHUR OR GERSHOWITZ, ARTHUR)
S2	32822	CANNULA? OR CATHETER? OR CANULA?
S3	3	S1 AND S2

? show files

File 347:JAPIO Oct 1976-2003/Aug(Updated 031202)  
(c) 2003 JPO & JAPIO

File 350:Derwent WPIX 1963-2003/UD,UM &UP=200379  
(c) 2003 Thomson Derwent

3/3,K/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

015704154 \*\*Image available\*\*  
WPI Acc No: 2003-766347/200372  
XRAM Acc No: C03-210551  
XRPX Acc No: N03-613832

**Retrograde cannula for delivering fluid to patient's vessel has sealing member having proximal and distal ends moved away from another to collapse the sealing member in response to axial sliding of inner body**

Patent Assignee: GERSHOWITZ A D (GERS-I)

Inventor: GERSHOWITZ A D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030163114	A1	20030828	US 200282074	A	20020226	200372 B

Priority Applications (No Type Date): US 200282074 A 20020226

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030163114	A1	9	A61M-031/00	

**Retrograde cannula for delivering fluid to patient's vessel has sealing member having proximal and distal ends...**

Inventor: GERSHOWITZ A D

Abstract (Basic):

... Retrograde **cannula** for delivering fluid to a patient's vessel has a sealing member disposed on a...

...sliding of an inner body within the outer body to reduce a profile of the **cannula** .

... Retrograde **cannula** for delivering fluid to a patient's vessel comprises a body arrangement defining a longitudinal...

...sliding of the inner body within the outer body to reduce a profile of the **cannula**0 .

...

...An INDEPENDENT CLAIM is also included for a method of inserting a retrograde **cannula** into a vessel of a patient's body, which comprises axially sliding the inner body...

...one another for collapsing the sealing member to a smaller profile; inserting the reduced-profile **cannula** into the vessel; and axially sliding the inner body within the outer body in a...

...The retrograde **cannula** is used for delivering a fluid to a patient's vessel...

...The inventive retrograde **cannula** has a profile which can be appreciably reduced to facilitate the insertion and removal of the **cannula** , without having to install a plug within the infusion lumen...

...The figure is a longitudinal sectional view taken through a **cannula** with a sealing element on it in a non-collapsed state

Technology Focus:

... the outer body. The sealing member is elastic and normally assumes an expanded state. The **cannula** includes holding mechanism for holding the inner and outer bodies in selected longitudinal

relationship.  
...Title Terms: CANNULA ;

3/3,K/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

015574302 \*\*Image available\*\*  
WPI Acc No: 2003-636459/200360  
XRPX Acc No: N03-506360

Retrograde cannula for delivering fluid e.g. cardioplegia to patient's vessel, has expandable sealing member e.g. inflatable balloon set near cannula body distal end and selectively inflated to abut and seal vessel inner wall

Patent Assignee: GERSHOWITZ A D (GERS-I)  
Inventor: GERSHOWITZ A D  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030163116	A1	20030828	US 200282119	A	20020226	200360 B

Priority Applications (No Type Date): US 200282119 A 20020226

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030163116	A1		9 A61M-031/00	

Retrograde cannula for delivering fluid e.g. cardioplegia to patient's vessel, has expandable sealing member e.g. inflatable balloon set near cannula body distal end and selectively inflated to abut and seal vessel inner wall

Inventor: GERSHOWITZ A D

Abstract (Basic):

... The cannula (10) has a cannula body (12) which forms an infusion lumen (18), a stylet lumen (30), and a pressure...

...distal end. An expandable sealing member e.g. inflatable balloon (22) is set near the cannula body distal end and selectively inflated to abut and seal the vessel inner wall.

... The figure shows the sectional view of the retrograde cannula .

...

...Retrograde cannula (10...

... Cannula body (12

...Title Terms: CANNULA ;

3/3,K/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2003 Thomson Derwent. All rts. reserv.

015574301 \*\*Image available\*\*  
WPI Acc No: 2003-636458/200360  
XRPX Acc No: N03-506359

Retrograde cannula for delivering cardioplegia (CPG) to heart vessel, has valve arranged in cannula body and shifted between open and closed positions for opening and closing passage arrangement to keep balloon in

its inflated state

Patent Assignee: GERSHOWITZ A D (GERS-I)

Inventor: GERSHOWITZ A D

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030163115	A1	20030828	US 200282098	A	20020226	200360 B

Priority Applications (No Type Date): US 200282098 A 20020226

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20030163115	A1	7	A61M-031/00	

Retrograde cannula for delivering cardioplegia (CPG) to heart vessel, has valve arranged in cannula body and shifted between open and closed positions for opening and closing passage arrangement to...

Inventor: GERSHOWITZ A D

Abstract (Basic):

... An automatically inflatable balloon extends around a cannula body adjacent to and spaced from a lumen outlet arrangement. A valve (34) arranged in the cannula body is shifted between open position to open a passage arrangement, and closed position for...

... The cannula body includes the passage arrangement for fluidly communicating the balloon with an infusion lumen (16...

...the heart vessel. The infusion lumen extending between the proximal and distal ends of the cannula body conducts pressurized fluid to the lumen outlet arrangement disposed adjacent the distal end. An...

...to volume. Enables balloon to stay inflated even when fluid is not being delivered through cannula .

...

...The figure shows the longitudinal cross-sectional view of the retrograde cannula , with the valve in closed position

...Title Terms: CANNULA ;

Set	Items	Description
S1	0	AU=(GERSHOWITZ A? OR GERSHOWITZ, A? OR GERSHOWITZ A OR GERSHOWITZ, A OR GERSHOWITZ A. OR GERSHOWITZ, A. OR GERSHOWITZ AD OR GERSHOWITZ, AD OR GERSHOWITZ A.D. OR GERSHOWITZ, A.D. OR - GERSHOWITZ ARTHUR OR GERSHOWITZ, ARTHUR)
S2	45269	CANNULA? OR CATHETER? OR CANULA?

? show files

File 348:EUROPEAN PATENTS 1978-2003/Nov W05  
(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20031203,UT=20031127  
(c) 2003 WIPO/Univentio

Set	Items	Description
S1	71	AU=(GERSHOWITZ A? OR GERSHOWITZ, A? OR GERSHOWITZ A OR GERSHOWITZ, A OR GERSHOWITZ A. OR GERSHOWITZ, A. OR GERSHOWITZ AD OR GERSHOWITZ, AD OR GERSHOWITZ A.D. OR GERSHOWITZ, A.D. OR - GERSHOWITZ ARTHUR OR GERSHOWITZ, ARTHUR)
S2	564207	CANNULA? OR CATHETER? OR CANULA?
S3	0	S1 AND S2
? show files		
File	2:INSPEC 1969-2003/Nov W5	(c) 2003 Institution of Electrical Engineers
File	5:Biosis Previews(R) 1969-2003/Dec W1	(c) 2003 BIOSIS
File	6:NTIS 1964-2003/Dec W1	(c) 2003 NTIS, Intl Cpyrght All Rights Res
File	8:Ei Compendex(R) 1970-2003/Nov W5	(c) 2003 Elsevier Eng. Info. Inc.
File	34:SciSearch(R) Cited Ref Sci 1990-2003/Nov W5	(c) 2003 Inst for Sci Info
File	434:SciSearch(R) Cited Ref Sci 1974-1989/Dec	(c) 1998 Inst for Sci Info
File	73:EMBASE 1974-2003/Dec W1	(c) 2003 Elsevier Science B.V.
File	155:MEDLINE(R) 1966-2003/Nov W4	(c) format only 2003 The Dialog Corp.
File	35:Dissertation Abs Online 1861-2003/Oct	(c) 2003 ProQuest Info&Learning
File	65:Inside Conferences 1993-2003/Dec W1	(c) 2003 BLDSC all rts. reserv.
File	71:ELSEVIER BIOBASE 1994-2003/Dec W1	(c) 2003 Elsevier Science B.V.
File	144:Pascal 1973-2003/Nov W5	(c) 2003 INIST/CNRS
File	94:JICST-EPlus 1985-2003/Dec W1	(c)2003 Japan Science and Tech Corp(JST)
File	95:TEME-Technology & Management 1989-2003/Nov W4	(c) 2003 FIZ TECHNIK
? pause		
?		



Set	Items	Description
S1	0	AU=(GERSHOWITZ A? OR GERSHOWITZ, A? OR GERSHOWITZ A OR GERSHOWITZ, A OR GERSHOWITZ A. OR GERSHOWITZ, A. OR GERSHOWITZ AD OR GERSHOWITZ, AD OR GERSHOWITZ A.D. OR GERSHOWITZ, A.D. OR - GERSHOWITZ ARTHUR OR GERSHOWITZ, ARTHUR)
S2	56433	CANNULA? OR CATHETER? OR CANULA?
? show files		
File 16:	Gale Group	PROMT(R) 1990-2003/Dec 10 (c) 2003 The Gale Group
File 160:	Gale Group	PROMT(R) 1972-1989 (c) 1999 The Gale Group
File 148:	Gale Group	Trade & Industry DB 1976-2003/Dec 11 (c)2003 The Gale Group
File 621:	Gale Group	New Prod.Annou.(R) 1985-2003/Dec 11 (c) 2003 The Gale Group
File 444:	New England Journal of Med.	1985-2003/Dec W2 (c) 2003 Mass. Med. Soc.
File 441:	ESPICOM Pharm&Med	DEVICE NEWS 2003/Dec W1 (c) 2003 ESPICOM Bus.Intell.
File 149:	TGG Health&Wellness	DB(SM) 1976-2003/Nov W3 (c) 2003 The Gale Group
File 98:	General Sci Abs/Full-Text	1984-2003/Oct (c) 2003 The HW Wilson Co.
File 135:	NewsRx Weekly Reports	1995-2003/Nov W5 (c) 2003 NewsRx
File 369:	New Scientist	1994-2003/Nov W5 (c) 2003 Reed Business Information Ltd.
File 370:	Science	1996-1999/Jul W3 (c) 1999 AAAS
File 498:	Detroit Free Press	1987-2003/Dec 09 (c) 2003 Detroit Free Press Inc.
File 724:	(Minneapolis)Star Tribune	1989-1996/Feb 04 (c) 1996 Star Tribune
File 725:	(Cleveland)Plain Dealer	Aug 1991-2003/Dec 09 (c) 2003 The Plain Dealer

Set	Items	Description
S1	564361	CANULA? OR CANNULA? OR CATHETER?
S2	46598	DC=(E01.370.370.380.410.200 OR E02.148.110 OR E5.135 OR E5- .140 OR E5.145 OR E2.620.135)
S3	29411	STYLET? OR GUIDEWIRE? OR GUIDE()WIRE? OR STIFFENER?
S4	2633	(CURVEABLE OR CURVABLE OR MALLEABLE OR FLEXIBLE OR DEFORMA- BLE OR CURVATE OR BENDABLE) (2N) (WIRE? OR PROBE? OR NEEDLE? OR INTRODUCER? OR ADVANCER?)
S5	19137087	METHOD? OR PROCEDURE?
S6	32224514	SYSTEM? OR PROCESS?
S7	1195833	INSERT? OR MANIPULAT?
S8	4986256	REMOV? OR CONDUCT?
S9	2108097	DISCHARG? OR PERFUS? OR INFUS?
S10	5410590	VESSEL? OR VASCULA? OR VEIN? OR ARTERY? OR ARTERIE? OR BLO- ODVESSEL?
S11	184670	RETROGRADE? OR RETRO()GRADE? OR ANTIGRADE OR ANTEGRADE OR - (ANTI OR ANTE) ()GRADE OR CARDIOPL?GIA? OR RETROPL?GIA? OR (CA- RDIO OR RETRO) ()PL?GIA?
S12	6255	DC=(E04.100.376.374 OR D18)
S13	273395	BALLOON? OR INFLAT?
S14	2008436	LUMEN? OR INLET? OR OUTLET? OR PASSAGE? OR PORT?
S15	196	S1:S2 AND S3:S4 AND S5:S6 AND S7:S9 AND S10 AND S13 AND S14
S16	18	S15 AND S11
S17	49	S15 AND S7:S9(5N)S3:S4
S18	18	S15 AND S11:S12
S19	23	S17 AND S3:S4(5N)S14
S20	11	S17 AND S9(5N)S14
S21	41	S16 OR S18:S20
S22	32	S21 AND PY<2003
S23	19	RD (unique items)

? show files

File 2:INSPEC 1969-2003/Dec W1  
(c) 2003 Institution of Electrical Engineers

File 5:Biosis Previews(R) 1969-2003/Dec W1  
(c) 2003 BIOSIS

File 6:NTIS 1964-2003/Dec W2  
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File 8:Ei Compendex(R) 1970-2003/Nov W5  
(c) 2003 Elsevier Eng. Info. Inc.

File 34:SciSearch(R) Cited Ref Sci 1990-2003/Dec W1  
(c) 2003 Inst for Sci Info

File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
(c) 1998 Inst for Sci Info

File 73:EMBASE 1974-2003/Dec W1  
(c) 2003 Elsevier Science B.V.

File 155:MEDLINE(R) 1966-2003/Nov W4  
(c) format only 2003 The Dialog Corp.

File 35:Dissertation Abs Online 1861-2003/Oct  
(c) 2003 ProQuest Info&Learning

File 65:Inside Conferences 1993-2003/Dec W2  
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File 71:ELSEVIER BIOBASE 1994-2003/Dec W2  
(c) 2003 Elsevier Science B.V.

File 144:Pascal 1973-2003/Nov W5  
(c) 2003 INIST/CNRS

File 94:JICST-EPlus 1985-2003/Dec W2  
(c) 2003 Japan Science and Tech Corp(JST)

File 95:TEME-Technology & Management 1989-2003/Nov W5  
(c) 2003 FIZ TECHNIK

23/3,K/1 (Item 1 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0014001771 BIOSIS NO.: 200200595282

Method of using a readily exchangeable perfusion dilatation catheter

AUTHOR: McInnes Peter R (Reprint); Sirhan Motasim M

AUTHOR ADDRESS: Surrey, UK\*\*UK

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1262 (3): Sep. 17, 2002 2002

MEDIUM: e-file

PATENT NUMBER: US 6451043 PATENT DATE GRANTED: September 17, 2002 20020917

PATENT CLASSIFICATION: 606-194 PATENT ASSIGNEE: Advanced Cardiovascular

Systems, Inc. PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

Method of using a readily exchangeable perfusion dilatation catheter  
2002

PATENT ASSIGNEE: Advanced Cardiovascular Systems, Inc.

ABSTRACT: A perfusion -type dilatation catheter which can be rapidly exchanged for another catheter without the need for exchange wires or guidewire extension wire. The dilatation catheter has an elongated catheter body with a distal guidewire port in the distal end of the catheter and a proximal guidewire port at least 10 cm but not more than 50 cm from the distal port. The catheter body has a first inflation lumen which extends from the proximal end of the catheter body to the interior of a dilatation balloon adjacent the distal end of the catheter body. A second, much shorter inner lumen is disposed between the proximal and distal guidewire ports and is adapted to slidably receive a guidewire. A plurality of perfusion ports are provided both proximal and distal to the balloon which are in fluid communication with the second inner lumen so that when the balloon is inflated within a patient's vascular system, blood will flow through the proximal perfusion ports and the second inner lumen and out the distal perfusion ports to minimize ischemic conditions distal to the catheter. A stiffening member is disposed within the catheter body proximal to the proximal guidewire port to provide improved pushability. The distal portion of the inflation lumen should have a transverse cross-sectional area of about 3 to about 20X10<sup>-5</sup> inch<sup>2</sup> and should not be greater than one-third the cross-sectional area of the perfusion lumen.

DESCRIPTORS:

...MAJOR CONCEPTS: Methods and Techniques

...METHODS & EQUIPMENT: surgical method ; ...

...elongated intravascular catheter --...

... guidewire ports --...

...surgical method ; ...

... perfusion ports --...

...surgical method ; ...

...readily exchangeable perfusion dilatation catheter --...

...medical equipment, perfusion -type

23/3,K/2 (Item 2 from file: 5)  
DIALOG(R)File 5: BIOSIS Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0013461982 BIOSIS NO.: 200200055493

**Readily exchangeable perfusion dilation catheter**

AUTHOR: McInnes Peter R (Reprint)

AUTHOR ADDRESS: 4 Grosvenor Court, Hawley Hill Camberley, Surrey, UK\*\*UK

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1252 (4): Nov. 27, 2001 2001

MEDIUM: e-file

PATENT NUMBER: US 6322577 PATENT DATE GRANTED: November 27, 2001 20011127

PATENT CLASSIFICATION: 606-194 PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

**Readily exchangeable perfusion dilation catheter**  
2001

ABSTRACT: A perfusion -type dilatation catheter which can be rapidly exchanged for another catheter without the need for exchange wires or guidewire extension wires. The dilatation catheter has an elongated catheter body with a distal guidewire port in the distal end of the catheter and a proximal guidewire port at least 10 cm but not more than 50 cm from the distal port. The catheter body has a first inflation lumen which extends from the proximal end of the catheter body to the interior of a dilatation balloon adjacent the distal end of the catheter body. A second, much shorter inner lumen is disposed between the proximal and distal guidewire ports and is adapted to slidably receive a guidewire. A plurality of perfusion ports are provided both proximal and distal to the balloon which are in fluid communication with the second inner lumen so that when the balloon is inflated within a patient's vascular system, blood will flow through the proximal perfusion ports and the second inner lumen and out the distal perfusion ports to minimize ischemic conditions distal to the catheter. A stiffening member is disposed within the catheter body proximal to the proximal guidewire port to provide improved pushability. The distal portion of the inflation lumen should have a transverse cross-sectional area of about 3 to about 20X10<sup>-5</sup> inch<sup>2</sup> and should not be greater than one-third the cross-sectional area of the perfusion lumen.

DESCRIPTORS:

METHODS & EQUIPMENT: readily exchangeable perfusion dilation catheter

--

23/3,K/3 (Item 3 from file: 5)  
DIALOG(R)File 5: BIOSIS Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0013215884 BIOSIS NO.: 200100387723

**Irradiation catheter and method of use**

AUTHOR: Teirstein Paul S (Reprint)

AUTHOR ADDRESS: 402 Coast Blvd., South La Jolla, CA, 92037, USA\*\*USA  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1244 (1): Mar. 6, 2001 2001  
MEDIUM: e-file  
PATENT NUMBER: US 6196996 PATENT DATE GRANTED: March 06, 2001 20010306  
PATENT CLASSIFICATION: 604-104 PATENT COUNTRY: USA  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English

**Irradiation catheter and method of use**  
**2001**

ABSTRACT: A **catheter** for use with a radioactive source within the **catheter** to irradiate a selected area of a blood **vessel** in combination with angioplasty **procedures**, to prevent restenosis of that area of the blood **vessel**. The **catheter** has a **guidewire** channel formed near its distal end to facilitate use of the **catheter** as a rapid exchange **catheter**, allowing insertion of the **catheter** over a **guidewire** also used in performance of an angioplasty **procedure**. The **catheter** also has a radiation **lumen** with a sealed end to retain the radioactive source within the **catheter**. The radiation **lumen** is sufficiently longer than the **guidewire** channel to extend into a non-sterile field, keeping the radiation source segregated from the blood, allowing the use of a non-sterile radiation source. The **catheter** can also be provided with a centering **balloon** or a set of centering wire loops to center the radioactive source radially within the blood **vessel**.

DESCRIPTORS:

...MAJOR CONCEPTS: **Methods** and **Techniques**

METHODS & EQUIPMENT: irradiation **catheter** --...

...irradiation **catheter** utilization **method** --...

...utilization **method**

23/3,K/4 (Item 4 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0013144514 BIOSIS NO.: 200100316353  
**Filter flush system and methods of use**  
AUTHOR: Tsugita Ross S  
JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1242 (1): Jan. 2, 2001 2001  
MEDIUM: e-file  
PATENT NUMBER: US 6168579 PATENT DATE GRANTED: January 02, 2001 20010102  
PATENT CLASSIFICATION: 604-9601 PATENT ASSIGNEE: SciMed Life **Systems**, Inc. PATENT COUNTRY: USA  
ISSN: 0098-1133  
DOCUMENT TYPE: Patent  
RECORD TYPE: Abstract  
LANGUAGE: English

**Filter flush system and methods of use**  
**2001**

PATENT ASSIGNEE: SciMed Life **Systems**, Inc.

ABSTRACT: A filter flush **system** for temporary placement of a filter in an

artery or vein is disclosed. The system typically includes a guidewire insertable within a guiding catheter, which has an occlusion balloon disposed about its distal end. The guidewire has an expandable filter, which can be collapsed to pass through a lumen and distal port of the guiding catheter. The lumen is adapted to receive a variety of endovascular devices, including angioplasty, atherectomy, and stenting catheters. Fluid medium or blood can be infused through the lumen of the guiding catheter to flush embolic material or mobile plaque generated during the endovascular procedures toward the expanded filter deployed downstream from the region of interest. Methods of using the filter flush system to entrap and remove embolic material from the vessel are also disclosed.

DESCRIPTORS:

...MAJOR CONCEPTS: Methods and Techniques

METHODS & EQUIPMENT: filter flush method --...

...filter method ; ...

...filter flush system --

23/3,K/5 (Item 5 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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0012053421 BIOSIS NO.: 199900313081

Method and apparatus for dilatation catheterization

AUTHOR: Inderbitzen Mark N (Reprint)

AUTHOR ADDRESS: Miramar, FL, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office  
Patents 1221 (3): 19-JUL-99 1999

MEDIUM: print

PATENT NUMBER: US 5895405 PATENT CLASSIFICATION: 606-194

PATENT ASSIGNEE: Cordis Corporation PATENT COUNTRY: USA

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

Method and apparatus for dilatation catheterization  
1999

ABSTRACT: Apparatus and method is disclosed for facilitating balloon catheter exchange in angioplasty procedures. A guide catheter allows the balloon catheter to be inserted into the subject to a region near a treatment region within the vascular system. A fluid source is provided for selectively inflating the balloon. A passageway in the catheter body that extends through the catheter balloon opens into the blood vessel via a sideport. A guidewire passageway extends through a distal most part of the catheter body to allow a guidewire to be inserted into the sideport and routed out the catheter body through a distal opening.

DESCRIPTORS:

METHODS & EQUIPMENT: balloon angioplasty...

...surgical method ; ...

... balloon catheter --...

...dilatation catheterization ---...

...surgical method

23/3,K/6 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0006801362 BIOSIS NO.: 198988116477

**EXPERIENCE WITH ROTATION ATHEROTOMY AND ATHERECTOMY**

AUTHOR: STECKMEIER B (Reprint); BAUMGART R; KUEFFER G; SCHWEIBERER L

AUTHOR ADDRESS: CHIRURG KLIN INNENSTADT CHIRURGISCHE POLIKLIN UNIV,  
NUSSBAUMSTR 20, D-8000 MUENCHEN 2\*\*WEST GERMANY

JOURNAL: Herz 14 (1): p43-51 1989

ISSN: 0340-9937

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: GERMAN

1989

ABSTRACT: In addition to currently available, low risk **procedures** for reestablishment of patency in arteriosclerotic **vascular** segments with bougie techniques as described by Dotter and the **balloon** dilatation modification according to Gruntzig, as necessary together with local thrombolysis, important new developments based...

...are the atherectomy according to Simpson as well as the rotation atherotomy with a flexible **catheter** and slowly rotating milling head or rapidly rotating head as used by Kensey. To provide a larger **lumen** of recanalization, we developed an atherotomy lathing **catheter** with a rapidly rotating head and various diameters which is now available for intraoperative use...

...by Vollmar with the "ring stripper" is used only intraoperatively and can only be performed **retrograde**. The effect of laser **systems** encompasses disintegration and ablation of occlusive material. The rotation atherotomy is based on the capability of discrimination between hard occlusive material and elastic **vascular** wall through suitable construction of the lathe head. Since, in passive **catheters**, the capability of lathing at the tip is associated with a high risk of perforation...

...disc face perpendicular to the axis of rotation, which protrudes only slightly from the hemispherical **catheter** tip, with a maximum at the center and minimum at the lateral borders, the lathing...

...has only a slight risk of perforation and no undesired sheering forces. The optimal lathing **procedure** is characterized by the proper choice of lathing head geometry and velocity of rotation, where the mechanism of action is based on an atraumatic **removal** of the occlusive material. Since with suitable dimensions of the lathe head, the debris consists...

...incurred. The prototypes developed function at 10,000 to 50,000 r.p.m. The **catheter** we have developed should be introduced 3 to 4 cm distal to the origin of the **artery** femoris profunda, after placement of a tourniquet, through a lateral incision. Accordingly, **perfusion** of the leg is via collaterals. To avoid emboli, in occlusions longer than 5 cm

...

...to re-establishing patency in the last segment, a Fogarty maneuver is incorporated. With this **catheter**, in seven of ten patients in stages III and IV, successful recanalization was achieved. For the use of the rotation lathe **catheter**, establishment of the indication should still be restrictive since too little experience is available to...

...the debris. Its use appears promising for complete occlusion which cannot be passed by a **guidewire** and with adequate run-off. On intraoperative use, if necessary, after unsuccessful atherectomy a bypass ...

...if the debris consists of particles between 10 and 100 .mu.m, they can be **removed** with a Fogarty **catheter**. The Simpson atherectomy **catheter** consists of a windowed-metal housing with a centrally-rotating, displaceable blade which is driven by a long flexible shaft. Juxtaposed to the cutting blade is an **inflatable balloon**. A flexible **guidewire** at the tip of the metal housing enables intraluminal steering. After introduction of the **catheter** with sheath technique, the metal housing is positioned through **inflation** of the **balloon** with the obstructive plaque at the opening. At 2,000 r.p.m. the cutting blade is activated and the debris is stored in the bow of the housing. The **catheter** is available in sizes 7, 9 and 11 French. With this **catheter**, successful treatment was performed in 17 patients with 23 stenoses in the femoro-popliteal **vessels** and four stenoses in the pelvic region; three of the pelvic stenoses required redilatation. Histologic...

...clinical trials in 1986, now more than 130 patients have been treated with the atherectomy **catheter**. After atherectomy, the **vascular** walls appear smooth and, typically, with no tears in the intima. The indication appears established...

...or exulcerated plaques as well as for residual stenoses after balloon dilatation or dynamic rotation **catheter** angioplasty when the stenosis cannot be passed by the **guidewire**. The atherectomy is now regarded as complimentary to conventional PTA **methods** and promises to improve further the results of percutaneous transluminal angioplasty.

DESCRIPTORS:

...MAJOR CONCEPTS: Cardiovascular **System** --

23/3,K/7 (Item 7 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
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0006755991 BIOSIS NO.: 198988071106

**OPEN-ENDED GUIDEWIRE NEW TECHNIQUE FOR BALLOON ANGIOPLASTY OF  
CHRONICALLY OCCLUDED CORONARY ARTERIES**

AUTHOR: VASSANELLI C (Reprint); TURRI M; MORANDO G; MENEGATTI G; ZARDINI P  
AUTHOR ADDRESS: DIV DI CARDIOL, P LE A STEFANI 1, 37126 VERONA, ITALY\*\*  
ITALY

JOURNAL: Catheterization and Cardiovascular Diagnosis 17 (4): p224-227  
1989

ISSN: 0098-6569

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

**OPEN-ENDED GUIDEWIRE NEW TECHNIQUE FOR BALLOON ANGIOPLASTY OF  
CHRONICALLY OCCLUDED CORONARY ARTERIES**



1989

...ABSTRACT: coronary occlusion is a growing indication to percutaneous transluminal coronary angioplasty. Since primary success of **balloon** angioplasty in this condition is usually limited by the difficulty of crossing the occlusion, different techniques have been described for this purpose, such as use of stiff **guidewires**, coronary **infusion catheters**, **guidewires** with an olive-shaped tip, or new developing **methods** (atherectomy, laser), in association with **balloon** dilatation. Here, we describe our initial experience with a thick (0.035 in) and relatively stiff open-ended **guidewire**, which has an inner (0.018 in diameter) **lumen** provided with a core wire. Several advantages are considered. The core wire yields a perfect means of steerability of the whole **system**, while pushability of a thicker **guidewire** is much greater. Moreover, the core wire can be **removed**, and contrast injections beyond the occlusion through the inner **lumen** can assure proper intraluminal location. Finally, position across the occlusion can be kept easily, since an exchange wire for conventional **balloon catheters** can be **inserted** in the inner **lumen** of the open-ended **guidewire**.

DESCRIPTORS:

...MAJOR CONCEPTS: Cardiovascular **System** --...

... **Methods** and Techniques

23/3,K/8 (Item 8 from file: 5)

DIALOG(R) File 5: Biosis Previews(R)

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0006743381 BIOSIS NO.: 198988058496

PULL-THROUGH APPROACH TO PERCUTANEOUS ANGIOPLASTY OF TOTALLY OCCLUDED  
COMMON ILIAC ARTERIES

AUTHOR: GINSBURG R (Reprint); THORPE P; BOWLES C R; WRIGHT A M; WEXLER L

AUTHOR ADDRESS: DEP DIAGN RADIOL NUCLEAR MED, STANFORD UNIVMED CENT,  
STANFORD, CALIF94305, USA\*\*USA

JOURNAL: Radiology 172 (1): p111-113 1989

ISSN: 0033-8419

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

PULL-THROUGH APPROACH TO PERCUTANEOUS ANGIOPLASTY OF TOTALLY OCCLUDED  
COMMON ILIAC ARTERIES

1989

ABSTRACT: A **method** has been developed to increase the probability of success of percutaneous transluminal **balloon** angioplasty of total occlusions of the common iliac **artery** when conventional **methods** have failed. In 10 patients with a totally obstructed iliac **artery**, a **guide wire** was passed through a **catheter** placed from the contralateral side around the aortic bifurcation and **antegrade** through the total obstruction. The end of the wire was either snared by a retrieval basket or guided through a sheath in the ipsilateral common femoral **artery**, thus providing a firmly anchored pathway for subsequent **manipulations**. **Balloons** were then **inserted retrograde** through both common femoral **arteries** and dilated. In the first five patients, ipsilateral **retrograde** passage of a **guide wire** had failed despite multiple attempts with a variety of devices. In the other five patients, the

contralateral **antegrade** approach was used initially. The new **method** was successful in all 10 patients with totally obstructed common iliac **arteries**.

DESCRIPTORS: HUMAN PERCUTANEOUS TRANSLUMINAL **BALLOON** ANGIOPLASTY  
OCCLUSIVE **VASCULAR** DISEASE **GUIDE WIRE** CATHETERIZATION

DESCRIPTORS:

...MAJOR CONCEPTS: Cardiovascular **System** --...

... **Methods** and Techniques

23/3,K/9 (Item 9 from file: 5)  
DIALOG(R)File 5: Biosis Previews(R)  
(c) 2003 BIOSIS. All rts. reserv.

0005056899 BIOSIS NO.: 198681020790

**DISTAL CORONARY ARTERY PERFUSION DURING PERCUTANEOUS TRANSLUMINAL  
CORONARY ANGIOPLASTY**

AUTHOR: ANDERSON H V (Reprint); LEIMGRUBER P P; ROUBIN G S; NELSON D L;  
GRUENTZIG A R

AUTHOR ADDRESS: INTERVENTIONAL CARDIOVASCULAR MED, EMORY UNIV HOSPITAL,  
1364 CLIFTON ROAD NE, ATLANTA, GEORGIA 30322, USA\*\*USA

JOURNAL: American Heart Journal 110 (4): p720-726 1985

ISSN: 0002-8703

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: ENGLISH

**DISTAL CORONARY ARTERY PERFUSION DURING PERCUTANEOUS TRANSLUMINAL  
CORONARY ANGIOPLASTY**  
1985

ABSTRACT: **Perfusion** of the coronary **artery** distal to an occluding angioplasty **balloon** was performed in 34 patients undergoing coronary angioplasty (PTCA). A randomized crossover study was employed using two exogenous substances as **perfusates**: lactated Ringer's solution (LR) and a fluorocarbon emulsion (FL), Fluosol-DA 20%. Both substances...

...solutions, but the FL will dissolve more oxygen than the LR. During two attempted coronary **artery** occlusions of 90 seconds each, we **perfused** through the central **lumen** (**guidewire** channel) of the PTCA **catheter** at 60 ml/min. With FL **perfusion** the mean time to onset of angina after occlusion was delayed (41  $\pm$  21 vs 33...

...0.24 vs 0.2  $\pm$  0.23 mV,  $p < 0.001$ ) when compared to LR **perfusion**. **Balloon** occlusion time was able to be extended with FL **perfusion** (71  $\pm$  22 vs 59  $\pm$  22 seconds  $p < 0.001$ ). These results indicate that **perfusion** of the distal coronary **artery** is possible during PTCA and can reduce ischemia during a prolonged **balloon** occlusion time.

DESCRIPTORS:

...MAJOR CONCEPTS: Cardiovascular **System** --

23/3,K/10 (Item 1 from file: 8)  
DIALOG(R)File 8: Ei Compendex(R)  
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05543157 E.I. No: EIP00045146385

Title: Aortic perfusion for CPB: critical element analysis of cannula flow rheology for improved hemodynamic performance

Author: Riebman, J.B.; Mager, L.  
Corporate Source: Endoscopic Technologies, Inc  
Conference Title: 46th Annual Conference and Exposition of ASAIO  
Conference Location: New York, NY, USA Conference Date:  
19000628-19000701  
E.I. Conference No.: 56674  
Source: ASAIO Journal v 46 n 2 Mar-Apr 2000. p 174  
Publication Year: 2000  
CODEN: ASATEJ ISSN: 1058-2916  
Language: English

**Title: Aortic perfusion for CPB: critical element analysis of cannula flow rheology for improved hemodynamic performance**

...Abstract: make cardiac surgery less invasive, the use of limited access incisions may preclude direct arterial **cannula insertion** into the ascending aorta or arch because the aorta cannot be reached or controlled directly through the surgical access site. The standard option for **perfusion** for closed-chest CPB is standard femoral **artery cannulation**, with the known attendant risks of femoral **retrograde aortic perfusion** such as dissection, embolism(due to high flow velocity and turbulence). After analyzing these critical rheologic elements, a unique aortic **perfusion system** was designed to provide improved performance. Computer-aided design, flow analyses and laboratory testing were employed for design. A new aortic **perfusion cannula system** was designed to provide improved performance for closed-chest CPB. The multifunction, multilumen arterial **perfusion cannula system** can be introduced via femoral **artery** and advanced into the aortic arch over a **guide wire** to accomplish remote-access **antegrade aortic perfusion**. The **cannula** has a large **lumen** for aortic blood delivery through multiple distal **outlet ports** positioned throughout the thoracic and abdominal aorta, as well as **lumens** for aortic occlusion **balloon inflation/deflation**, aortic root venting and **cardioplegia** delivery. A dramatic reduction in **cannula perfusion** outflow velocity is seen with the multiport **cannula** design with distributed flow through the multiple **ports**, as well as a restoration of aortic pressure gradients normally seen with **antegrade aortic perfusion**. Reductions in aortic blood flow turbulence and shear-stress are also observed with the multiport...

...be used to identify opportunities for progress through innovation. For surgical approaches where direct aortic **cannulation** is not possible or desirable, this **antegrade perfusion system** is an improved technique for CPB over standard femoral **cannulation** and **perfusion**. (Author abstract)

Descriptors: Cardiovascular surgery; Hemodynamics; Capillary flow; Rheology; Cardiovascular **system**; Computer aided design; Implants (surgical)

Identifiers: Aortic **perfusion**; Critical element analysis; **Cannula** flow rheology; Direct arterial **cannula insertion**

23/3,K/11 (Item 1 from file: 34)  
DIALOG(R) File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

11188565 Genuine Article#: 618ZM No. References: 12  
**Title: Transvenous retrograde portography for identification and characterization of portosystemic shunts in dogs**  
Author(s): Miller MW (REPRINT); Fossum TW; Bahr AM  
Corporate Source: Texas A&M Univ, Coll Vet Med, Dept Small Anim Med & Surg, E DeBakey inst, College Stn//TX/77843 (REPRINT); Texas A&M Univ, Coll Vet

Med, Dept Small Anim Med & Surg, E DeBaKey inst, College Stn//TX/77843;  
Texas A&M Univ, Coll Vet Med, Dept Large Anim Med & Surg, College  
Stn//TX/77843

Journal: JOURNAL OF THE AMERICAN VETERINARY MEDICAL ASSOCIATION, 2002 , V  
221, N11 (DEC 1), P1586-+

ISSN: 0003-1488 Publication date: 20021201

Publisher: AMER VETERINARY MEDICAL ASSOC, 1931 N MEACHAM RD SUITE 100,  
SCHAUMBURG, IL 60173-4360 USA

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

**Title: Transvenous retrograde portography for identification and  
characterization of portosystemic shunts in dogs  
, 2002**

**Abstract:** A method for transvenous retrograde portography (TRP) in  
dogs suspected to have a portosystemic shunt (PSS) and results in 20  
dogs are described. For TRP, dogs were anesthetized and positioned in  
left lateral recumbency A dual-lumen balloon-tipped catheter was  
inserted into the right jugular vein and advanced into the azygos  
vein. The balloon was inflated to occlude the azygos vein, and  
contrast material was injected during fluoroscopic evaluation. The  
catheter was then positioned in the caudal vena cava just cranial to  
the diaphragm. The balloon was again inflated to occlude the vena  
cava, and contrast material was again injected. Once a shunt was  
identified, selective catheterization was attempted with a guide  
wire and angled catheter.

A PSS was identified in 18 of the 20 dogs. In 10 of the 18, the  
shunt vessel could be selectively catheterized, allowing  
measurement of portal pressures while the shunt was occluded with the  
balloon. In 1 dog, results of TRP were normal, but subsequent  
exploratory celiotomy revealed a single...

...TRP may be a useful adjunctive diagnostic test that is less invasive  
than operative mesenteric vein portography and allows measurement  
of portal pressures before and after temporary shunt occlusion.

23/3,K/12 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

08046585 Genuine Article#: 240UB No. References: 27

**Title: Percutaneous mitral valve dilatation with the multi-track system**

**Author(s):** Bonhoeffer P (REPRINT) ; Esteves C; Casal U; Tortoledo F; Yonga  
G; Patel T; Chisholm R; Luxereau P; Ruiz C

**Corporate Source:** HOP NECKER ENFANTS MALAD, DIV CARDIOL, DEPT PEDIAT  
CARDIOL, 149 RUE DE SEVRES/F-75743 PARIS 15//FRANCE/ (REPRINT); DANTE  
PAZZANESE HOSP, /SAO PAULO//BRAZIL/; HOSP CLIN, /CARACAS//VENEZUELA/;  
MATER MISERICORDIAE HOSP, HEART UNIT/NAIROBI//KENYA/; INST  
CARDIOL, /AHMEDABAD/GUJARAT/INDIA/; RES CTR, /AHMEDABAD/GUJARAT/INDIA/;  
ST MICHAELS HOSP, /TORONTO/ON M5B 1W8/CANADA/; HOP TENON, DEPT  
CARDIOL/F-75970 PARIS//FRANCE/; LOMA LINDA INT HEART INST, /LOMA  
LINDA//CA/

Journal: CATHETERIZATION AND CARDIOVASCULAR INTERVENTIONS, 1999 , V48, N2  
(OCT), P178-183

ISSN: 1522-1946 Publication date: 19991000

Publisher: WILEY-LISS, DIV JOHN WILEY & SONS INC, 605 THIRD AVE, NEW YORK,  
NY 10158-0012

Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

Title: Percutaneous mitral valve dilatation with the multi-track system  
, 1999

Abstract: We developed the Multi-Track System for percutaneous mitral valvotomy and described the preliminary results in 1995. Here we report the first 100 consecutive cases after the original publication, Two separate balloon catheters are positioned on a single guidewire, The first catheter, with only a distal guidewire lumen, is introduced into the vein and then advanced into the mitral orifice. Subsequently, a rapid exchange balloon catheter running on the same guidewire is inserted and lined up with the first catheter so the two are positioned side by side. Both balloons are then inflated simultaneously, Age of the patients was 31 +/- 12.8 years and weight 50 +/- 14 kg...

...patient had significant mitral insufficiency after dilatation, which did not require surgery. The Multi-Track System is a valid alternative to the existing procedures for the treatment of mitral stenosis and uses simpler and less costly catheters. (C) 1999 Wiley-Liss, Inc.

...Identifiers--DOUBLE- BALLOON ; FOLLOW-UP; STENOSIS; VALVOTOMY; VALVULOPLASTY; COMMISSUROTOMY; CATHETER; SINGLE; RESTENOSIS; IMMEDIATE

23/3,K/13 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

05125370 Genuine Article#: VB804 No. References: 12

Title: THE MULTI-TRACK ANGIOGRAPHY CATHETER - A NEW TOOL FOR COMPLEX CATHETERIZATION IN CONGENITAL HEART-DISEASE

Author(s): BONHOEFFER P; PIECHAUD JF; STUMPER O; BONNET D; AGGOUN Y; SIDI D ; KACHANER J

Corporate Source: HOP NECKER ENFANTS MALAD, SERV CARDIOL PEDIAT, 149 RUE SEVRES/F-75743 PARIS 15//FRANCE/

Journal: HEART, 1996, V76, N2 (AUG), P173-177

ISSN: 1355-6037

Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: THE MULTI-TRACK ANGIOGRAPHY CATHETER - A NEW TOOL FOR COMPLEX CATHETERIZATION IN CONGENITAL HEART-DISEASE  
, 1996

Abstract: Objective - To develop a simple and versatile catheter system for complex cardiac catheterisation because angiography and pressure measurements during diagnostic and interventional cardiac catheterisation are often unsatisfactory.

Methods - The Multi-Track Angio catheter system is a single lumen side-hole catheter with a short distal extension containing a lumen for a standard guidewire. The catheter is introduced over a previously placed guidewire running through this distal extension. It can then be manipulated within the heart by sliding along the guidewire. The tip of the catheter is always stabilised by the guidewire. This stability enhances angiography and pressure recordings.

Results - The Multi-Track Angio catheter system was used in 84 patients (age 1 day - 20 years). Thirty one procedures were diagnostic and 53 interventional. The decision to use the Multi-Track Angio catheter was based on three criteria: firstly, unsatisfactory

angiography obtained with conventional equipment; secondly, difficult **catheter** course requiring use of a **guidewire** ; and thirdly, requirement for angiography and pressure recordings during interventional **procedures** . No complications were encountered. High quality angiography could be performed in all cases without **catheter** recoil.

Conclusions - The Multi-Track Angio **catheter system** allows for high quality angiography and pressure recordings during diagnostic and interventional cardiac **catheterisation** . The advantage of the **system** is that both angiography and pressure recordings can be performed repeatedly from stable **catheter** positions using a previously placed **guidewire** . This reduces the need for **guidewire manipulations** or **catheter** exchanges and decreases **procedure** time and the risk of complications.

...Identifiers-- **BALLOON ANGIOPLASTY; STENOSIS; ARTERIES; INFANT**  
Research Fronts: 94-7293 001 ( **BALLOON ANGIOPLASTY; SEVERE**  
**AORTIC-STENOSIS; INTERVENTIONAL PEDIATRIC CARDIOLOGY; PULMONARY**  
**ATRESIA; CONGENITAL HEART-DISEASE**)

23/3,K/14 (Item 4 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2003 Inst for Sci Info. All rts. reserv.

04731716 Genuine Article#: UD789 No. References: 15  
**Title: MITRAL DILATATION WITH THE MULTI-TRACK SYSTEM - AN ALTERNATIVE APPROACH**  
Author(s): BONHOEFFER P; PIECHAUD JF; SIDI D; YONGA G; JOWI C; JOSHI M; MUGO M; KACHANER J; PARENZAN L  
Corporate Source: HOP NECKER ENFANTS MALAD, SERV CARDIOL PEDIAT, 149 RUE SEVRES/F-75743 PARIS 15//FRANCE/; KENYATTA NATL HOSP/NAIROBI//KENYA/; WORLD LAB, ICSC PROJECT MCD4/LAUSANNE//SWITZERLAND/  
Journal: CATHETERIZATION AND CARDIOVASCULAR DIAGNOSIS, 1995 , V36, N2 (OCT ), P189-193  
ISSN: 0098-6569  
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

**Title: MITRAL DILATATION WITH THE MULTI-TRACK SYSTEM - AN ALTERNATIVE APPROACH**  
, 1995

...Abstract: developed a simple and versatile new technique (MultiTrack) for percutaneous mitral valvotomy using two separate **balloon catheters** positioned on a single **guidewire** . The first **catheter** , with only a distal **guidewire** lumen and a proximal **balloon** , is introduced over the **guidewire** into the **vein** and then advanced into the mitral valve orifice. Subsequently, a normal **balloon catheter** running on the same **guidewire** is **inserted** and lined up with the first **catheter** so the two are positioned side by side. The **balloons** are then **inflated** simultaneously.

The technique was applied in 12 patients between 10 and 44 years of age...

...52 mmHg) to 12 mmHg (range, 5-22 mmHg).

Mitral dilatation with the Multi-Track **system** gives results comparable to those with previously described techniques and uses simpler and less costly **catheters** . (C) 1995 Wiley-Liss, Inc.  
...Identifiers--PERCUTANEOUS **BALLOON DILATATION; VALVULOPLASTY;**

**CATHETER; IMMEDIATE; STENOSIS; VALVOTOMY; VALVE; COMMISSUROTOMY; INOUE**  
Research Fronts: 94-0757 002 (PERCUTANEOUS **BALLOON** MITRAL  
VALVULOPLASTY; OPEN SURGICAL COMMISSUROTOMY; MODIFIED INOUE TECHNIQUE)

23/3,K/15 (Item 1 from file: 73)  
DIALOG(R)File 73:EMBASE  
(c) 2003 Elsevier Science B.V. All rts. reserv.

11006858 EMBASE No: 2001053042

**Radiologic placement of tunneled hemodialysis catheters in occluded neck, chest, or small thyrocervical collateral veins in central venous occlusion**

Funaki B.; Zaleski G.X.; Leef J.A.; Lorenz J.N.; Van Ha T.; Rosenblum J.D.

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Radiology ( RADIOLOGY ) (United States) 2001, 218/2 (471-476)

CODEN: RADLA ISSN: 0033-8419

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 8

**Radiologic placement of tunneled hemodialysis catheters in occluded neck, chest, or small thyrocervical collateral veins in central venous occlusion**

PURPOSE: To evaluate interventional radiologic placement of tunneled hemodialysis catheters in small thyrocervical collateral veins or in occluded veins in the neck or chest in patients with limited venous access. MATERIALS AND METHODS : A femoral venous approach was used to recanalize occluded veins or catheterize small collateral veins in 24 patients in whom all major central veins were occluded. A loop snare or catheter was used as a target for antegrade puncture. Metallic stents were deployed if necessary. Once antegrade access was secured, catheters were placed in a conventional fashion. RESULTS: Technical success was achieved in 22 (88%) of 25 procedures (one patient underwent two procedures ). All catheters functioned immediately after placement. There were two procedural complications: a vasovagal episode requiring intravenously administered...

...respiratory distress requiring intubation. There were no instances of pneumothorax, nerve injury, or bleeding complications. Catheter malfunction requiring exchange occurred at a rate of 0.67 per 100 catheter days. Infection requiring catheter removal occurred at a rate of 0.06 per 100 catheter days. Primary patency was 90% at 1 month, 71% at 6 months, and 25% at...

...venous access sites have been exhausted, interventional radiologic venous recanalization for the placement of permanent catheters is safe and effective. Catheters placed in recanalized veins or small collateral veins have shorter primary patency rates compared with those of conventionally placed catheters , but the former can be maintained for relatively long periods.

DEVICE BRAND NAME/MANUFACTURER NAME: Super Arrow-flex percutaneous sheath/Arrow/United States; Glidewire guide wire /Boston Scientific/United States; Blue Max balloon catheter /Boston Scientific; Wallstent/Boston Scientific; Superstiff Amplatz wire/Boston Scientific; Passage hemostasis valve/merit medical/Ireland; One-S catheter /tessio cath/United States

MEDICAL DESCRIPTORS:

\* vascular access

hemodialysis; central venous catheterization ; central venous catheter ; femoral vein ; collateral circulation; balloon catheter ; human; male; female; clinical article; aged; adult; article; priority journal

EMTREE CODES:

E5.140 ; E5.135 ; E4.80.840; E2.530.390; E1.130.100.920; E2.620.135.100

...

2001

23/3,K/16 (Item 2 from file: 73)

DIALOG(R)File 73:EMBASE

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10585021 EMBASE No: 2000050241

New multifunctional percutaneous transluminal coronary angioplasty catheter device capable of balloon inflation , local drug delivery and coronary perfusion

Noguchi T.; Yasuda S.; Itoh T.; Arai T.; Kanda K.; Tsutsui N.; Nonogi H.; Matsuda T.

Dr. H. Nonogi, Division of Cardiology, Hospital, National Cardiovascular Center, Fujishiro-dai 5-71, Suita, Osaka 565-8565 Japan

Journal of Cardiology ( J. CARDIOL. ) (Japan) 2000, 35/1 (41-45)

CODEN: JOCAE ISSN: 0914-5087

DOCUMENT TYPE: Journal; Article

LANGUAGE: JAPANESE SUMMARY LANGUAGE: ENGLISH; JAPANESE

NUMBER OF REFERENCES: 6

New multifunctional percutaneous transluminal coronary angioplasty catheter device capable of balloon inflation , local drug delivery and coronary perfusion

A new percutaneous transluminal coronary angioplasty catheter with multiple functions of balloon inflation , local drug delivery and coronary perfusion has been devised. The device consists of an inflatable lumen , a drug delivery lumen , and a perfusion (or guide wire ) lumen . A drug can be infused from the port located distal to the inflated balloon during continuous blood perfusion via the perfusion lumen . Fluorescence-labeled heparin and peroxidase administered using the device permeated into denuded vessel tissues during ongoing perfusion and remained there for over 24 hr. This prototype device indicates the potential therapeutic implications...

DEVICE BRAND NAME/MANUFACTURER NAME: Dispatch catheter

MEDICAL DESCRIPTORS:

\*transluminal coronary angioplasty; \*coronary artery disease--diagnosis--di; \*coronary artery disease--surgery--su; \*coronary artery disease--therapy--th; \*drug delivery system ; \*gene therapy restenosis--prevention--pc; restenosis--therapy--th; heart perfusion ; risk assessment; artery catheterization ; fluorescence; thrombogenesis; coronary artery blood flow; artery intima proliferation; balloon catheter ; article

2000

23/3,K/17 (Item 3 from file: 73)

DIALOG(R)File 73:EMBASE

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06917520 EMBASE No: 1997201965

**Efficacy of low-molecular-weight heparin delivery with the dispatch catheter following balloon angioplasty in the rabbit iliac artery**  
Baumbach A.; Oberhoff M.; Bohnet A.; Miljak T.; Herdeg C.; Horch B.; Blessing E.; Kunert W.; Haase K.K.; Karsch K.R.

Dr. A. Baumbach, Medizinische Klinik III, Otfried-Muller-Str. 10, 72076 Tübingen Germany

Catheterization and Cardiovascular Diagnosis ( CATHETER. CARDIOVASC. DIAGN. ) (United States) 1997, 41/3 (303-307)

CODEN: CCDID ISSN: 0098-6569

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 20

**Efficacy of low-molecular-weight heparin delivery with the dispatch catheter following balloon angioplasty in the rabbit iliac artery**

Local drug delivery can be achieved with active injection systems or passive contact of a compound with the arterial wall. The Dispatch (TM) catheter allows for passive diffusion of drugs from drug compartments while preserving blood flow through the...

...solution of the low-molecular-weight heparin Reviparin. In 16 New Zealand white rabbits, successful balloon dilatation was performed in both iliac arteries, followed by local delivery of 4 ml Reviparin (1,000 IU/ml). The arteries were harvested at 7, 28, or 56 d following the procedure. The intimal cell layers increased substantially between 7 and 28 d following balloon dilatation with or without local drug delivery. The medial cell layers showed only a little...

...maximum amount of macrophages in the intima and media was detected after 28 d. The lumen area decreased with time and was 0.6 +/- 0.7 mm<sup>2</sup> in the local...

...mm<sup>2</sup> in the control group. In conclusion, local delivery of Reviparin with the Dispatch catheter is safe and feasible. However, the infusion of highly concentrated low-molecular-weight heparin over a short period of time did not result in a reduction of neointima formation and restenosis following balloon dilatation in the rabbit iliac artery.

MEDICAL DESCRIPTORS:

\* artery intima proliferation--complication--co; \* artery intima proliferation--drug therapy--dt; \* artery intima proliferation--prevention--pc; \* catheter; \*drug delivery system; \*iliac artery; \*percutaneous transluminal angioplasty; \*restenosis--drug therapy--dt; \*restenosis--complication--co; \*restenosis--prevention--pc  
angiocardiology; animal experiment; animal model; animal tissue; artery media; artery wall; article; controlled study; drug diffusion; drug efficacy; guide wire; implantable port system; intracoronary infusion; macrophage; nonhuman; rabbit; vascular smooth muscle

EMTREE CODES:

...J2.10; G1.680.680; G1.680.670.200; E7.30.840; E5.20.430; E5.140 ; A11.690.570.550; A13.20.50.550; A13.670.70.570.550; J2...

1997

23/3,K/18 (Item 1 from file: 155)

DIALOG(R) File 155:MEDLINE(R)

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05017536 86017682 PMID: 2931743

Antegrade selective catheterization of the superficial femoral

artery using a movable-core guide wire .  
Bishop A F; Berkman W A; Palagallo G L  
Radiology (UNITED STATES) Nov 1985 , 157 (2) p548, ISSN 0033-8419  
Journal Code: 0401260  
Document type: Journal Article  
Languages: ENGLISH  
Main Citation Owner: NLM  
Record type: Completed

Antegrade selective catheterization of the superficial femoral artery using a movable-core guide wire .  
Nov 1985 ,

A simplified method of selective antegrade catheterization of the superficial femoral artery using a movable-core guide wire is described. This technique obviates the need for multiple catheter and guide wire manipulations and exchanges when preferential passage of the guide wire into the profunda femoral artery occurs following antegrade common femoral artery puncture.

Descriptors: Angioplasty, Balloon -- methods --MT; \* Catheterization --instrumentation--IS; \*Femoral Artery ; Catheterization -- methods --MT

23/3,K/19 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
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02794107 JICST ACCESSION NUMBER: 96A0681576 FILE SEGMENT: JICST-E  
Evaluation of Coronary Flow Velocity Distal to the Perfusion Balloon

Catheter During PTCA Procedure using Doppler Guidewire .

TANAKA NOBUHIRO (1); TAKAZAWA KENJI (1); IBUKIYAMA CHIHARU (1)

(1) Tokyo Medical College

Tokyo Ika Daigaku Zasshi(Journal of Tokyo Medical College), 1996 ,

VOL.54,NO.3, PAGE.234-241, FIG.7, TBL.2, REF.15

JOURNAL NUMBER: F0570AAB ISSN NO: 0040-8905 CODEN: TIDZA

UNIVERSAL DECIMAL CLASSIFICATION: 616.12-089

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

Evaluation of Coronary Flow Velocity Distal to the Perfusion Balloon  
Catheter During PTCA Procedure using Doppler Guidewire .

, 1996

ABSTRACT: Perfusion balloon catheters provide distal coronary flow during PTCA procedure , enabling prolonged inflation without apparent ischemia. Prolonged inflation is expected to improve the results of PTCA, recovering from abrupt closure and possibly reducing the restenosis rate. However, in some cases perfusion balloon catheters do not provide sufficient protection for ischemia. We assessed distal coronary flow during PTCA procedure using a Doppler guidewire to evaluate the relationship between distal coronary flow velocity and the appearance of myocardial ischemia. This study included 24 patients who underwent elective PTCA with perfusion balloon catheters . A Doppler guidewire was positioned distal to the lesion in the target vessel through the center lumen of the perfusion balloon catheter in 14 patients, and alongside the perfusion balloon catheter in the other 10 patients. Average peak velocity (APV) and maximal peak velocity (MPV) were measured, and diastolic/systolic velocity ratio (DSVR) was calculated during standard

and perfusion balloon catheter inflations and after PTCA procedure . Distal flow during standard balloon inflation could be detected in only 3 patients (12%). The antegrade distal flow provided by perfusion balloon catheters could be recorded in all patients, and the flow increased significantly when the central lumen guidewire was retracted (from APV  $9.3 \pm 5.0$  cm/sec to  $13.9 \pm 6.5$ ,  $p < 0.01$ ). Even with the perfusion balloon catheter , ischemic ECG change developed in 9 patients (38%) and in one of them inflation could not be sustained. Although APV and MPV in patients with ischemic ECG change were...

...DESCRIPTORS: intra-aortic balloon pumping...

...indwelling catheter ;

...BROADER DESCRIPTORS: vascular surgery...

... balloon dilatation...

... catheterization ; ...

...blood vessel prosthesis...

...coronary artery disease...

... vascular disease...

... catheter ;

Set	Items	Description
S1	56211	CANULA? OR CANNULA? OR CATHETER?
S2	0	DC=(E01.370.370.380.410.200 OR E02.148.110 OR E5.135 OR E5-.140 OR E5.145 OR E2.620.135)
S3	5350	STYLET? OR GUIDEWIRE? OR GUIDE()WIRE? OR STIFFENER?
S4	2860	(CURVEABLE OR CURVABLE OR MALLEABLE OR FLEXIBLE OR DEFORMABLE OR CURVATE OR BENDABLE) (2N) (WIRE? OR PROBE? OR NEEDLE? OR INTRODUCER? OR ADVANCER?)
S5	2457575	METHOD? OR PROCEDURE?
S6	9320982	SYSTEM? OR PROCESS?
S7	394634	INSERT? OR MANIPULAT?
S8	2054133	REMOV? OR CONDUCT?
S9	272696	DISCHARG? OR PERFUS? OR INFUS?
S10	340590	VESSEL? OR VASCULA? OR VEIN? OR ARTERY? OR ARTERIE? OR BLO-ODVESSEL?
S11	5737	RETROGRADE? OR RETRO()GRADE? OR ANTIGRADE OR ANTEGRADE OR - (ANTI OR ANTE) ()GRADE OR CARDIOPL?GIA? OR RETROPL?GIA? OR (CARDIO OR RETRO) ()PL?GIA?
S12	0	DC=(E04.100.376.374 OR D18)
S13	370675	BALLOON? OR INFLAT?
S14	3364203	LUMEN? OR INLET? OR OUTLET? OR PASSAGE? OR PORT?
S15	296	S1:S2 AND S3:S4 AND S5:S6 AND S7:S9 AND S10 AND S13 AND S14
S16	38	S15 AND S11:S12
S17	82	S15 AND S7:S9(5N)S3:S4
S18	12	(S17 OR S15) AND S3:S4(5N)S14 AND S9(5N)S14
S19	14	S16 AND S17
S20	113	(S17 OR S15) AND S7:S9(5N)S10
S21	50	S20 AND S5:S6(5N)S7:S9
S22	95	S16 OR S18 OR S19 OR S21
S23	86	S22 AND PY<2003
S24	67	RD (unique items)

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File 724:(Minneapolis)Star Tribune 1989-1996/Feb 04  
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File 725:(Cleveland)Plain Dealer Aug 1991-2003/Dec 13  
(c) 2003 The Plain Dealer

24/5/43 (Item 5 from file: 149)  
DIALOG(R)File 149:TGG Health&Wellness DB(SM)  
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01974636 SUPPLIER NUMBER: 71403706 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**Unusual Complication of Retrograde Dissection to the Coronary Sinus of  
Valsalva During Percutaneous Revascularization(\*): A Single-Center  
Experience and Literature Review.**

Yip, Hon-Kan; Wu, Chiung-Jen; Yeh, Kuo-Ho; Hang, Chi-Ling; Fang, Chi-Yuan;  
Hsieh, Kelvin Yuan-Kai; Fu, Morgan  
Chest, 119, 2, 493  
Feb,  
2001

PUBLICATION FORMAT: Magazine/Journal; Refereed ISSN: 0012-3692  
LANGUAGE: English RECORD TYPE: Fulltext TARGET AUDIENCE: Professional  
WORD COUNT: 4271 LINE COUNT: 00377

DESCRIPTORS: Transluminal angioplasty--Complications  
FILE SEGMENT: HI File 149

24/5/67 (Item 29 from file: 149)  
DIALOG(R)File 149:TGG Health&Wellness DB(SM)  
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01178737 SUPPLIER NUMBER: 07864515

**Pull-through approach to percutaneous angioplasty of totally occluded common iliac arteries .**

Ginsburg, Robert; Thorpe, Patricia; Bowles, Charles R.; Wright Allan M.;  
Wexler, Lewis  
Radiology, v172, n1, p111(3)  
July,  
1989

PUBLICATION FORMAT: Magazine/Journal ISSN: 0033-8419 LANGUAGE: English  
RECORD TYPE: Abstract TARGET AUDIENCE: Professional

**ABSTRACT:** A new **method** has been developed to pass a **balloon catheter** through dense areas of atherosclerotic (hardening of the **arteries**) material to open the main **artery** of the leg. A **balloon catheter** is a small tube that is pushed through a needle-like **inserter** into the main **artery** of the leg. When it reaches the area of the atherosclerotic plaque it expands to open the cavity ( **lumen** ) of the **vessel** . In some cases the material is so thick and dense that the **catheter** can not be directly pushed through the affected area. Therefore, a **guide wire** may first be **inserted** and pushed through the dense plaque. This paper reports on a **method** of pulling the **catheter** across the atherosclerotic area by snaking the **guide wire** in from the **artery** on the opposite side and down ( **retrograde** ) into the **artery** which is being operated upon. The **balloon catheter** is then attached to the guide and it is literally pulled into position. The **procedure** has been used on 10 hospitalized patients with an average age of 59 years. All patients were severely restricted by their reduced leg arterial blood flow (claudication). The first five attempts to push the **guide wire** failed, and the pull-through **method** was then used. The final group of patients had the pull-through **method** used as the primary means of **inserting** the **balloon catheter** . In carefully selected cases the pull-through technique can be used to treat more severe atherosclerotic **vessel** disease by percutaneous (through the skin) technique than was previously possible. The **method** is not without risks, and the **procedure** is not as durable as a surgical graft of the blocked area.

**DESCRIPTORS:** Arterial occlusions--Surgery; Atherosclerosis--Surgery;  
Angioplasty--Technique; Iliac **artery** --Surgery; Transluminal angioplasty  
--Technique; Arteriosclerosis--Surgery  
**FILE SEGMENT:** HI File 149